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AT THE



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TORONTO PRESS



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INDUSTRIAL CANADA



WHAT ARE YOU GETTING FOR YOUR MONEY?

A PLAIN TALK TO MANUFACTURERS WHO SPEND
\$1,000 TO \$3,000 PER YEAR FOR ADVERTISING

WE are continually meeting manufacturers who say they don't do enough advertising to justify employing our organization to take care of it. Yet these same manufacturers' appropriations average \$2,000 a year.

Some even reply to our solicitation with the statement "We do not do any advertising," when we have in our pocket an advertisement of that particular firm clipped from a current magazine or newspaper.

To be facetious, one might reply "What do you call advertising, anyway? Is your advertisement in such and such a paper put there for tribute or do you expect to get business by it?"

The fact of the matter is, every manufacturer does some kind of advertising, although many of them regard their trade paper and directory advertisements as a contribution for the good of the cause.

But it is a pity to see thousands of dollars frittered away every month in the purchase of aimless publicity, when that same amount of money intelligently spent would create business and return a profit upon the investment.

We have recently persuaded a number of manufacturers, who have hitherto regarded their advertising with almost indifference, to put their appropriations on a business basis and accept our advice upon ways and means of spending the money.

Are you willing to consider a proposal from us?

We can show a man with a thousand or more active or prospective customers how, for the sum of about ten cents per month per customer, he can do really effective advertising and help stir up business amongst men who are likely to be wallowing in the slough of despondent inertia, if they are not lifted out of the rut pretty soon.

Write for further particulars to

J. J. GIBBONS, LIMITED

AGENTS FOR ADVERTISERS

Tribune Building
WINNIPEG

119 West Wellington Street
TORONTO

Coronation Building
MONTREAL

**PUBLISHED BY THE CANADIAN
MANUFACTURERS ASSOCIATION** INCORPORATED.

HEAD OFFICE BRANCH OFFICES,

• TORONTO • MONTREAL, HAMILTON, WINNIPEG, VANCOUVER, HALIFAX, QUEBEC.

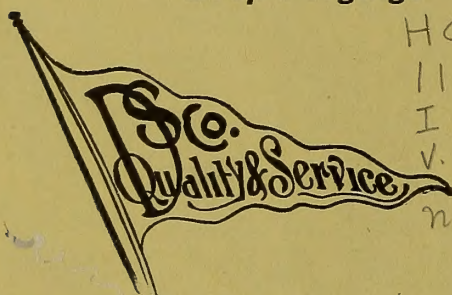
MALLEABLE IRON CASTINGS

The Pratt & Letchworth Company Limited

BRANTFORD ONTARIO

Automobile Parts

Drop Forgings



HC
III
I 4
V. 16
no. 7-11

Saddle Trees and Saddlery Hardware

WE are now manufacturing these lines for a number of Canadian firms filling war contracts. We are the Pioneers and the largest manufacturers of all steel saddle tree arches in Canada. :: ::

Sheet Metal Work

General Stampings

THE DOMINION STAMPING COMPANY LIMITED

Walkerville, Ont.



798013

Giving Satisfaction"

This is the true measure of a manufacturer's service to his constituency. It has been our constant aim since we commenced business eight years ago. Our large and rapidly expanding business is proof that our products and our methods of doing business appeal to our customers.

The greatest possible care and attention are given at our Refinery to the manufacture of the different lines—the highest obtainable quality being our goal. The statement "WE MAKE THAT GOOD OIL" has now passed into a proverb as referring to the products of The British American Oil Co.

We guarantee every gallon of British "Peerless" and Motor Gasolene, Benzine, Lamp Oil, Lubricating Oil, "Ford Motor Oil," "Autolene" for other motors, Fuel Oil, Road Oil and other Products.

We are prepared to live up to the guarantee that if any of our goods are not as represented they may be returned at our expense and money will be refunded if already paid for same. In no case will we allow a customer to make a loss on account of our products not being equal to representation.

We make our products as good as we know how and have justifiable confidence in them. Our customers have a right to demand value for their money and we see that they get it. We do not pose as philanthropists; this is pure business.

Our watchword is "GIVING SATISFACTION."

The BRITISH AMERICAN OIL CO., Limited

REFINERS, FOOT OF CHERRY STREET, TORONTO

Head Office: LUMSDEN BUILDING, TORONTO

Branches: MONTREAL, OTTAWA, LONDON, WINDSOR

Union Pipe Couplings That Do Not Leak, Eliminate Expense

DART UNIONS

Do Not Leak

Heavy iron parts — Bronze to bronze ground ball joint.

No stretch—No deterioration—No up-keep.

Your jobber sells them.

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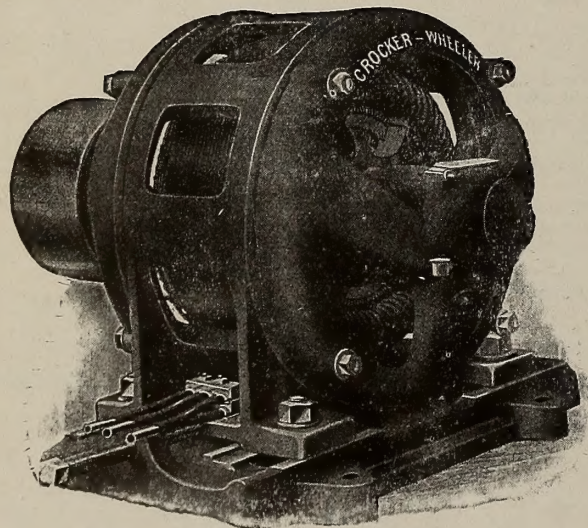
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THE DESIGN OF CROCKER-WHEELER INDUCTION MOTORS

INCLUDES :

Heavy Shafts

Large Journals

High Power Factor

Excellent Efficiency

They have many other desirable features;
Bulletin 155 describes them.

THE CANADIAN CROCKER - WHEELER CO., Limited

MANUFACTURERS AND ELECTRICAL ENGINEERS

Head Office and Works : St. Catharines

District Offices : Montreal, Toronto, Vancouver

We Have Prepared the Way

WE HAVE SPENT thousands of dollars on Street Car patrons impressing on them the advantages of purchasing "Made-in-Canada" Products.

We were the first in the field with a "Made-in-Canada" campaign, prepared, placed and carried out entirely at our own expense, for the benefit of Canadian Street Car advertisers.

Canadian Manufacturers

who use Street Car advertising get the direct benefit of all the money we have spent, in addition to getting the greatest possible amount of the best advertising for every dollar of their own they spend on Street Car space.

There are 1,735,685 passengers carried daily on the street car lines we control throughout Canada, and with these we have prepared the way for "Made-in-Canada" campaigns.

They are ready to purchase goods made in Canada, but they have to be told what goods are made here.

At a cost of only One Dollar you can reach over 48,000 of these consumers through an advertisement in the Street Cars.

Let us tell you more about it. Any of our offices will respond promptly to a request for information.

The
Canadian Street Car Advertising Company
Limited

MONTREAL

TORONTO

WINNIPEG



NAMCO Screw-Cutting Service for Canadian Buyers

THE NAMCO Plant at Montreal will give you an entirely new idea of service and dependability.

It is backed by an organization long skilled in the production of screw-machine work. The plant is equipped with Acme Automatics, the up-to-the-minute screw-cutting machines for rapid, accurate output.

Add to this the satisfaction of receiving screw-machine work, true to specifications, cleanly threaded and smoothly finished,—in other words a carefully made product ready to use from the packing-case.

Isn't that your idea of a complete screw-cutting service?

Work is done to individual specifications and Standard Screw Products are carried in stock for prompt shipment. Just send samples or blue prints and get estimates promptly on any job up to $2\frac{1}{4}$ in. diameter and $10\frac{1}{2}$ in. long.

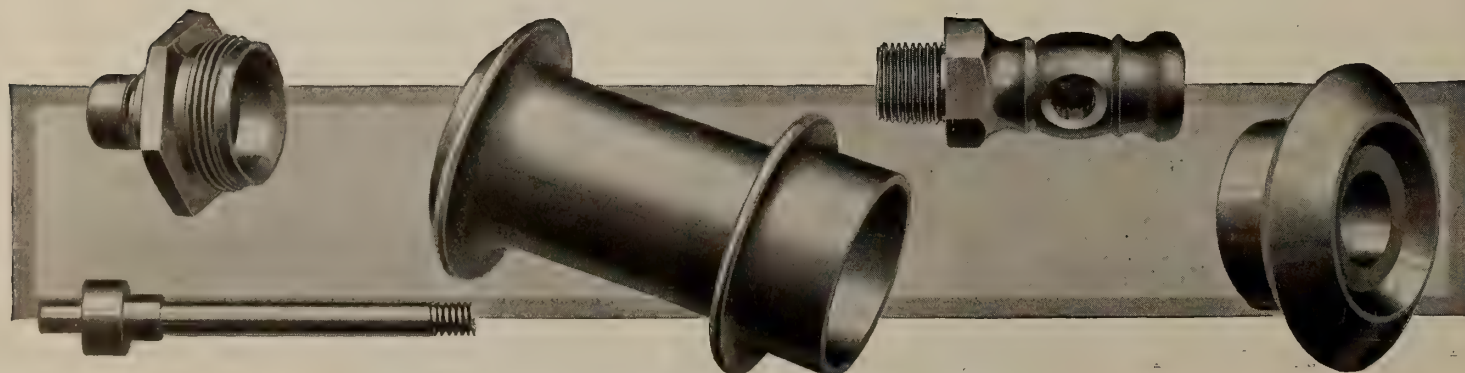
For Specials—Ask for the "Parts for the Trade" Book; it shows some 200 special screw-machine jobs completed the "Acme Way."

For Standard Nuts, Screws, Studs, etc., get the Milled Products Catalog—a handy and complete list for buyers.

The National-Acme Mfg. Co.

MONTREAL, P.Q.

Decourcelles St. and G.T.R., St. Henri





FACTORY EQUIPMENT



STEEL Tables, Stools, Benches, Lockers
Bins, Shelving, Chutes

WIRE Baskets, Window Guards, Partitions
Machine Guards, Fencing

The GEO. B. MEADOWS, Toronto Wire, Iron and Brass Works Co., Limited
479 WELLINGTON ST. WEST, TORONTO, CANADA

Built-in Merit

Shapers—Lathes



Sensitive Column Drills

Sensitive Bench Drills

Improved Power Hack Saws

Write for our catalogue if you want good values at low prices.

THE D. MCKENZIE MACHINERY COMPANY
GUELPH, ONTARIO

We are not interested in any sanders now, but will be glad to place the book on file, if you will send it without expense or obligation.

Remarks.....

Name.....

Address.....

For Mr.....

Fill out and mail this coupon—NOW!

For Your Files

BERLIN SANDERS

**Clip the
Coupon
Get the Book**

The Latest Views on Sand- ing Operations FREE!

*48 pages of the
most interesting
and instructive
information ever
compiled on this
important
finishing method.*

FOR the convenience of you who give close attention to every sanding operation and the machines best adapted for your particular work and conditions, this book will offer invaluable suggestions.

No one type of sander is suitable for all classes of work. The peculiar size and shape of your particular stock may best be handled with greatest economy and perfect workmanship on the latest Roll-feed Sander, either with one, two, three, four or six drums.

Then again an Endless-Bed feed may best serve your purpose. Or perhaps a flexible belt sander may save considerable by finishing such work as you can now only do by hand.

Each type of Berlin Sander is adapted for a definite purpose, yet all "overlapping" one another in usefulness to insure highest efficiency of operation on the work in hand.

To judge such usefulness, requires first-hand information. The book above supplies a definite knowledge.

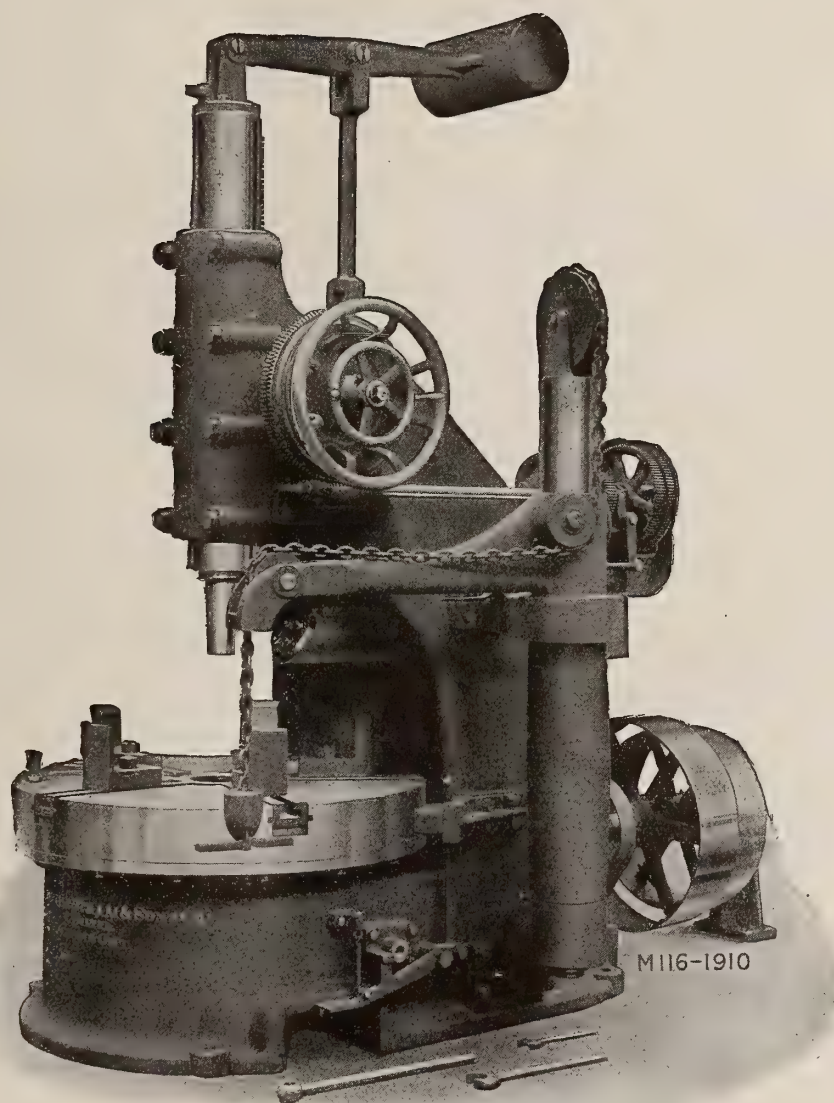
Our Service Department is in position to supply you, without expense or obligation, with data on the latest sanding methods used in every kind of factory where sanders are used. Why not avail yourself of such help?

THE BERLIN MACHINE WORKS, LTD. - Hamilton, Ont.

MADE RIGHT—RIGHT IN CANADA
Berlin



BERTRAM MACHINE TOOLS



42" CAR WHEEL BORER EQUIPPED WITH AIR
HOIST FOR WHEELS

We Manufacture a Full Line of Locomotive and
Car Shop Machinery

THE JOHN BERTRAM & SONS CO., Limited

DUNDAS, ONTARIO, CANADA

1205 McArthur Building
WINNIPEG

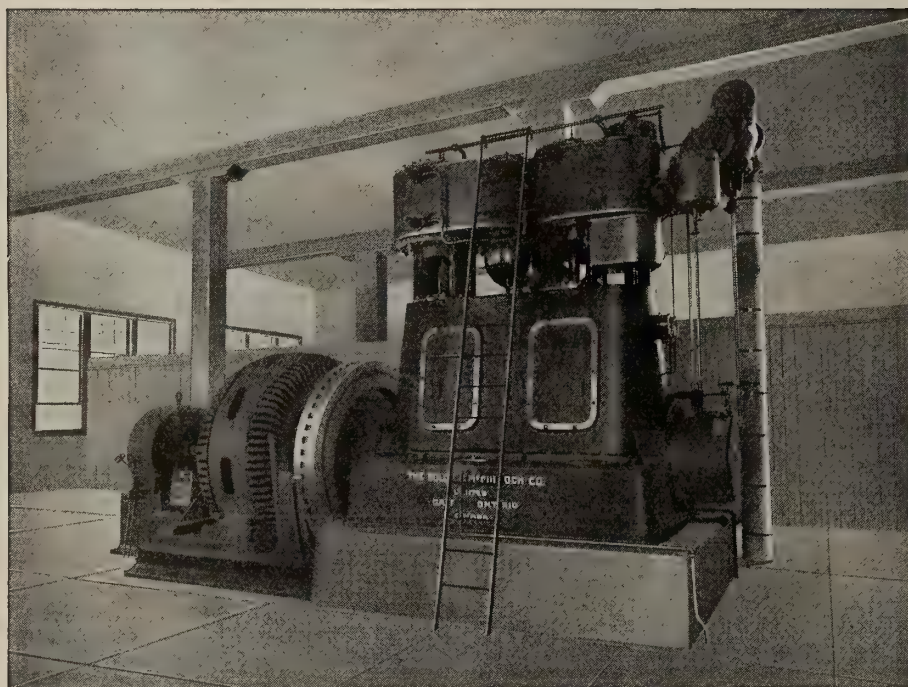
723 Drummond Bldg.
MONTREAL

VANCOUVER
609 Bank of Ottawa Building

POWER EQUIPMENT

Engines, Boilers, Heaters, Tanks, Pumps, Condensers and Transmission Machinery, Designed by Experts to Give the Highest Possible Efficiency

MADE
IN
C
A
N
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D
A



MADE
IN
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A

Showing a large Two Cyl. Compound, Vertical Enclosed, Forced Lubrication Steam Engine of 300 k.w. capacity, built and installed by us for THE ONTARIO MALLEABLE IRON CO., at OSHAWA, ONT.

G. & McC. Co. Vertical Steam Engines

have been installed in over Fifty Canadian Power Plants in less than three years which speaks well for the reception given this engine by the Engineering Profession and manufacturers in general. They are giving excellent service to their owners.

These Engines are fully illustrated and described in our New Catalogue No. 34, a copy of which is yours for the asking.

The Goldie & McCulloch Co., Limited

HEAD OFFICE AND WORKS

GALT, ONTARIO, CANADA

TORONTO OFFICE:

Suite 1101-2,
Traders Bank Bld'g.

WESTERN BRANCH:

248 McDermott Ave.,
Winnipeg, Man.

QUEBEC AGENTS:

Ross & Greig,
412 St. James St.
Montreal, Que.

BRITISH COLUMBIA AGENTS:

Robt. Hamilton & Co.,
Vancouver, B.C.

THE NICHOLS CHEMICAL COMPANY, LIMITED

MANUFACTURING CHEMISTS

HEAD OFFICE: 222 ST. JAMES STREET, MONTREAL

Branch Office—120 Mill Street, Toronto

WORKS: Capelton, Que., Sulphide, Ont., Barnet, B.C. WAREHOUSES: Montreal, Toronto

Sulphuric Acid
Muriatic Acid
Nitric Acid
Hydrofluoric Acid
Mixed Acid

Sulphate Soda
Sulphide Soda
Hypo-Sulphite Soda
Bi-Sulphite Soda
Phosphate Soda

Glauber's Salt
Blue Vitriol
Sulphate Alumina
Papermaker's Alum
Caustic Soda

Bleaching Powder
Tri-Sodium Phosphate
Ammonia
Salt Cake
Tin Crystals

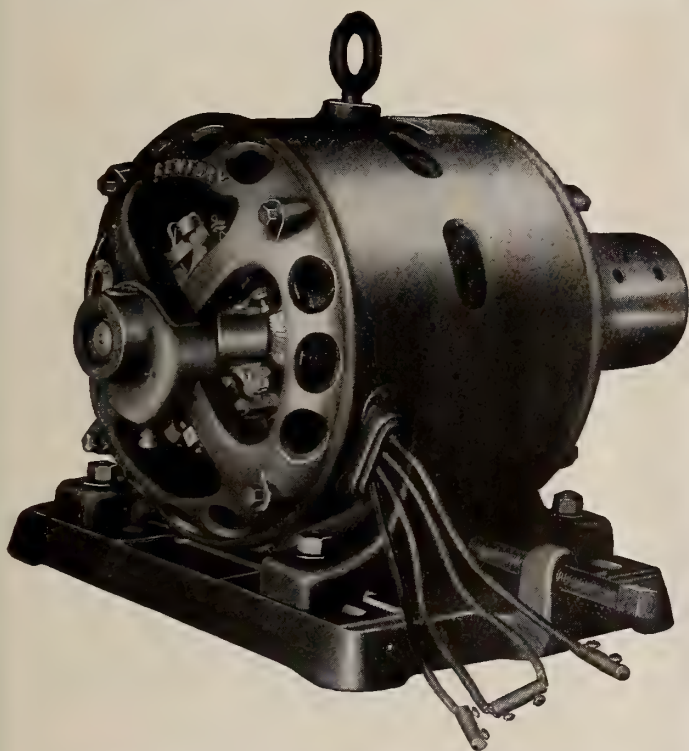
Agents for Baker & Adamson's Chemically Pure Acids and Chemicals
AGENTS FOR CANADIAN SALT CO.—"WINDSOR" BRAND CAUSTIC SODA & BLEACHING POWDER

Jones & Moore Electric Co.

LIMITED

294-300 Adelaide St. W.

Toronto



MANUFACTURERS OF DYNAMOS AND MOTORS
REPAIRS PROMPTLY PERFORMED

The Canada Metal Co., Limited

Manufacture in Canada

Our
Babbitt
Metals
Give
Excel-
lent
Service



We
are
Proud
of the
Goods
We
Manu-
acture

FOR GENERAL MACHINERY BEARINGS

TRY

Harris Heavy Pressure

THE BABBITT METAL WITHOUT A FAULT

WE HAVE EVERYTHING IN METALS

Ask for Our New Catalogue. Mailed FREE on Request

THE CANADA METAL CO., LIMITED

Head Office and Factory, Toronto Branch Factories, Montreal, Winnipeg

ARMSTRONG WHITWORTH OF CANADA

LIMITED

MANUFACTURERS OF CELEBRATED BRANDS OF

HIGH SPEED STEEL & DRILLS

"AW" FOR CUTTING ALL METALS
AT HIGH SPEEDS

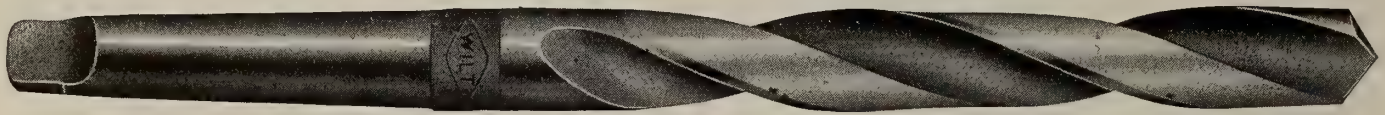
FOR HARD METALS — "TYR"
RAILWAY & TRAM TYRES

OFFICE 22 VICTORIA SQ. MONTREAL

WORKS LONGUEUIL QUE.

"Morrow" Twist Drills

are the best made. They are used by nearly all the large Manufacturing Plants in the Dominion of Canada.



John Morrow Screw & Nut Company, Limited

INGERSOLL - ONTARIO

Morrow Drills Excel in Efficiency.

Morrow Drills are Made in Canada.

THE CONSOLIDATED MINING AND SMELTING CO. OF CANADA, LIMITED

BUSINESS OFFICE AND WORKS: TRAIL, BRITISH COLUMBIA

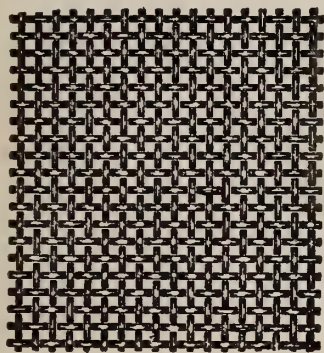
SMELTERS AND REFINERS
Purchasers of all Classes of Ores

Producers of
TRAIL BRAND PIG LEAD

Eastern Agents : Thomas Robertson & Co., Limited, Montreal

Canada Wire & Iron Goods Co.

HAMILTON - - CANADA



Manufacturers of
Double Crimped
Wire Cloth and
Wire Screening
for all purposes of
Iron, Brass, Copper,
Bronze, Galvanized
and Tinned Wire,
etc.

There is no kind of Wire Fabric required in the production of any machine or manufactured article that we cannot furnish.

We also manufacture:—

Bank and Office Grilles and Ornamental Iron
Work in all finishes.

Wire Guards for Factory Windows, Moulders'
Riddles, Laboratory Testing Sieves, Steel
Factory Stools and Metal Lockers.

Send for Catalogue — Enquiries Solicited

Premier

MORE MILES PER GALLON

Gasoline

Experienced motorists know the value of getting, not merely good fuel, but the same fuel every time the tank is filled.

Premier Motor Gasoline is a homogeneous, uniform refinery product—the same wherever you buy it.

Polarine Motor Oil—the lubricant that never thickens from cold.

THE IMPERIAL OIL COMPANY
Limited
BRANCHES IN ALL CITIES



Your Factory

Do any of your
factory troubles
originate in your
finishing room?

MAYBE you need a little expert advice on varnish and finishing methods. If so we would be glad to confer with you.

Quality is not the only thing to be considered by the varnish buyer, adaptability is fully as important.

Our varnish-making experience of nearly 60 years qualifies us to meet every possible varnish want.

There is a made-in-Canada varnish that will meet your requirements exactly, and if you are not using it, you are losing money in your finishing-room.

Let us hear from you; we can give you perfect service and reduce your overhead.

BERRY BROTHERS
(INCORPORATED)
World's Largest Varnish Makers

Established 1858

(163)

WALKERVILLE, ONT.

ALWAYS USE
Hammer Brand Plaster of Paris

Manufactured for Half a Century—the Standard of Excellence



Try it and Compare
 Its Surface Covering Capacity
 With Other Brands

MANUFACTURED SOLELY BY

ALBERT MANUFACTURING CO.
 Hillsborough, New Brunswick, Canada

EXPORT AGENTS: THE IMPERIAL EXPORT CO., LIMITED

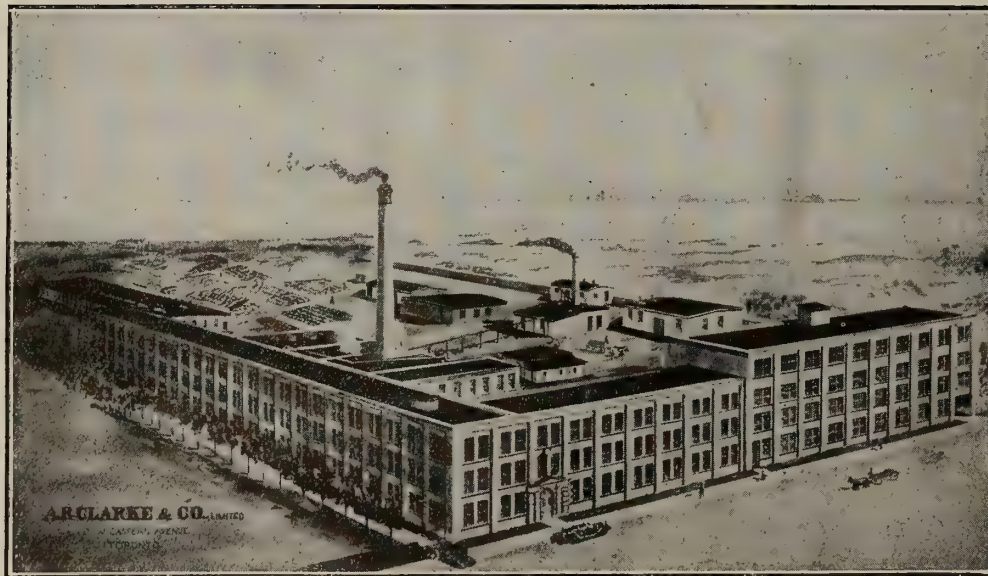
MELBOURNE
 17 Queen St.

SYDNEY
 Martin's Chambers, Moore St.

AUCKLAND
 34 Fort Street

CHRISTCHURCH
 ————St.

633-661
 EASTERN
 AVENUE



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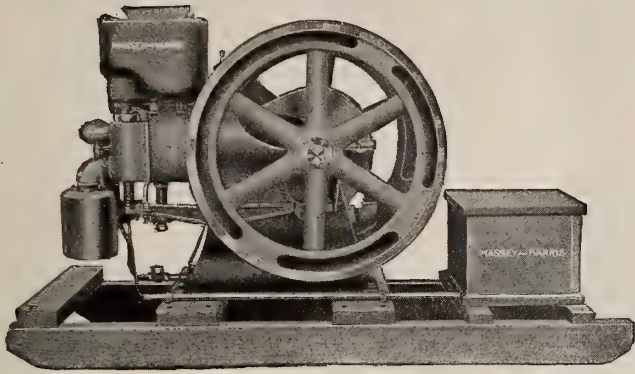
The Largest Patent Leather Manufacturers
 in the British Empire

A. R. CLARKE & CO., LIMITED

MONTREAL

TORONTO

QUEBEC



MASSEY-HARRIS GASOLINE ENGINES

For the Contractor and Builder

FOR construction work of various kinds, a Massey-Harris Gasoline Engine will be found most useful. Above is shown one of our Engines mounted on skids, and below is an Engine connected direct to a Diaphragm Suction Pump. Both of these combinations are very handy.

The Massey-Harris Contractor's Hoisting Outfit is an indispensable part of the contractor's equipment. The engine is geared direct to the Hoisting Drum, although when required for other purposes it can be detached.

These Engines are also furnished in Portable outfits, from $4\frac{1}{2}$ horse power up, mounted on steel-wheeled trucks. A reputation for reliability, economy and convenience is what Massey-Harris Gasoline Engines have won for themselves throughout Canada and the United States, and every one sold brings in somebody else who wants one.

Information as to dimensions and prices of Engines may be had from any Massey-Harris Agent, or by writing direct to any of our Branches.

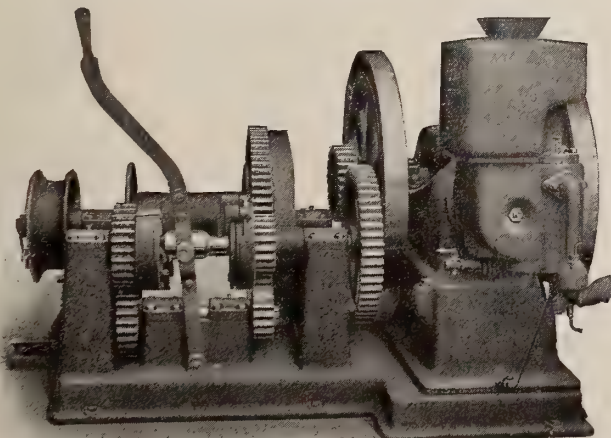
MASSEY-HARRIS COMPANY, LIMITED

HEAD OFFICES, TORONTO, CANADA

Branches at

Toronto Montreal Moncton Winnipeg Regina
Saskatoon Yorkton Calgary Edmonton

Agencies Everywhere



BEFORE YOU BUY BELTING

CONSULT

Sadler & Haworth
ESTABLISHED - 1876

Tanners and Manufacturers

MONTREAL—511 William St.

ST. JOHN, N.B.—149 Prince William St.

TORONTO—38 Wellington St. East

WINNIPEG—Princess and Bannatyne Sts.

VANCOUVER, B.C.—107 Water Street

Who manufacture the famous

“CLIMAX”

AND

“AMPHIBIA”

BRANDS

Good belts lower the cost
of manufacturing.



GARLOCK

PACKING

For High Pressure Steam Rods
Use Garlock Style Number 200

For Medium Pressure Steam Rods
Use Garlock Style Number 446

For Low Pressure Steam Rods
Use Garlock Style Number 333

For Worn or Scored Piston Rods
Use Garlock Style Number 336

For Cold Water Piston Rods
Use Garlock Style Number 99

For Inside Packed Plungers
Use Garlock Style Number 260

For Outside Packed Plungers
High Pressure Hot Water
Use Garlock Style Number 1907

For Outside Packed Plungers
High Pressure Cold Water
Use Garlock Style Number 960

These Packings are Guaranteed to
Give Satisfactory Service Under
the Above Mentioned Conditions

The Garlock Packing Co.

HAMILTON, ONTARIO

BRANCHES IN PRINCIPAL CITIES



Men forget business cares in the enjoyment of

Gourlay-Angelus

Player-Pianos



A GOURLAY-ANGELUS provides ANYONE with the ability to play ANY music artistically.

In the opportunity for recreation thus afforded, many busy men find enjoyment hitherto undreamed of, as well as a complete rest from the business worries and cares of the day. If you find it hard to leave these cares behind you when you go home, depend upon it, a Gourlay-Angelus will make you forget them.

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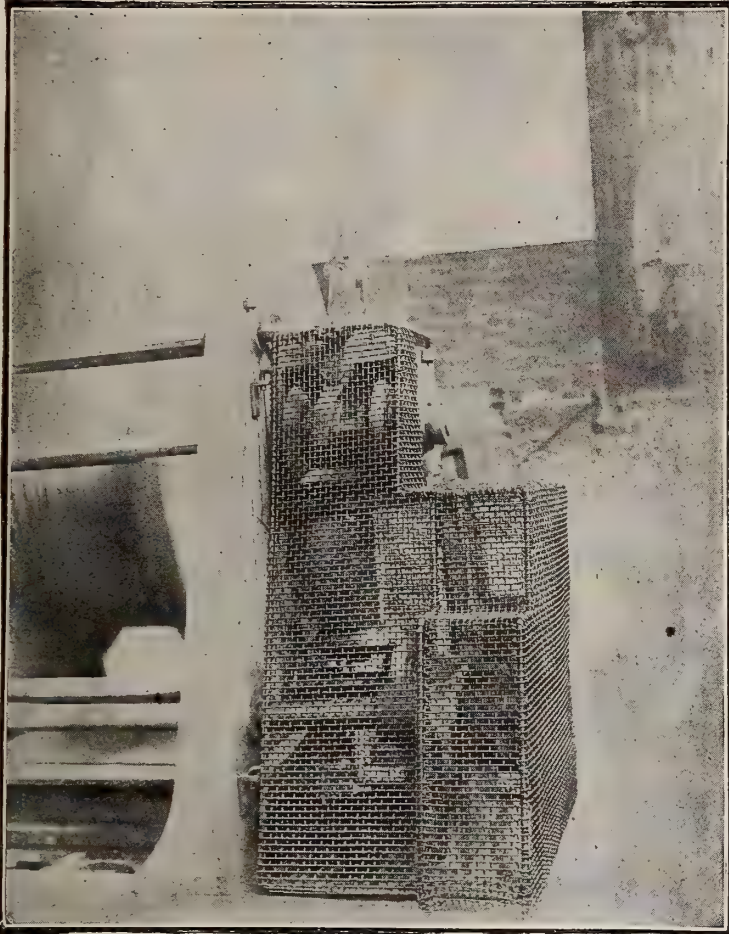
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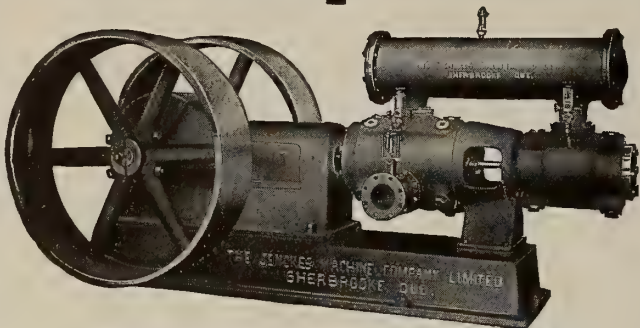
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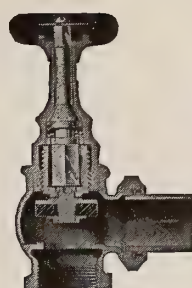
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Hon. JAS. S. DUFF,
Minister of Agriculture.

W. C. MCGHIE,
Chairman of Board.

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ROBERT HUNGERFORD, Parliament Buildings, Toronto.
MISS MARGARET CARLYLE, Parliament Buildings, Toronto.
MRS. A. BROWN, Parliament Buildings, Toronto.
THOMAS KEILTX, 25 Russell Avenue, Ottawa.
S. J. MALLION, 214 Wellington Street, Stratford.
FRED KELLOND, 157 Wellington Street South, Hamilton.
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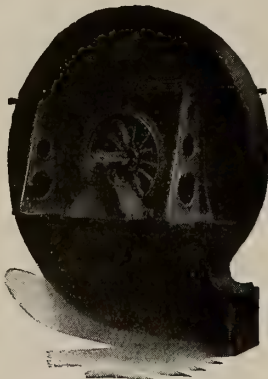


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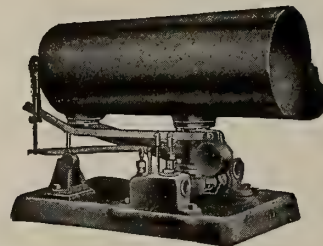
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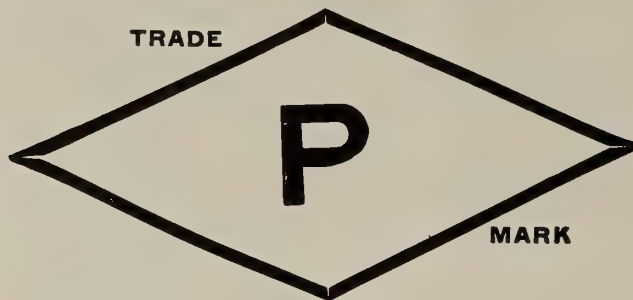
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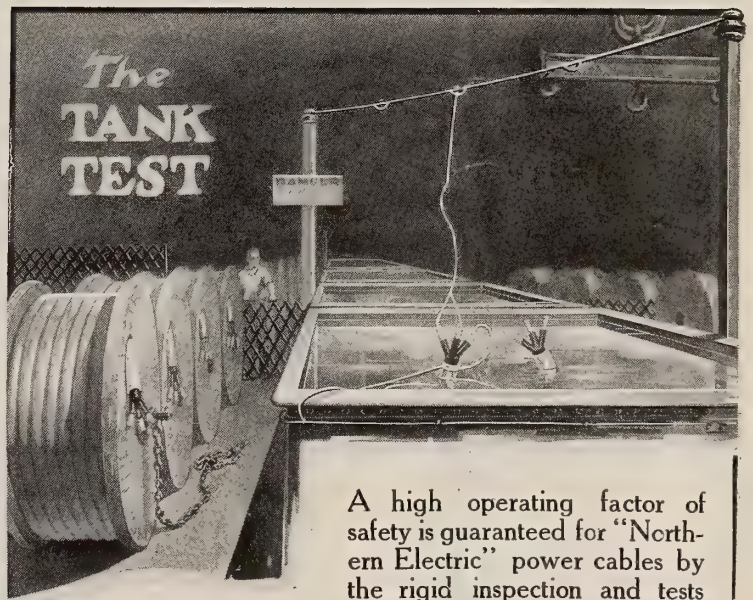


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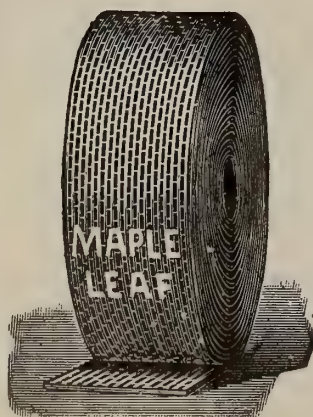
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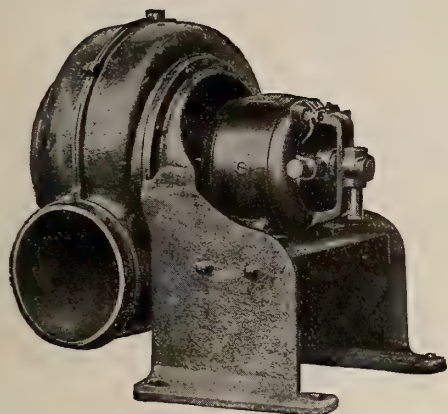
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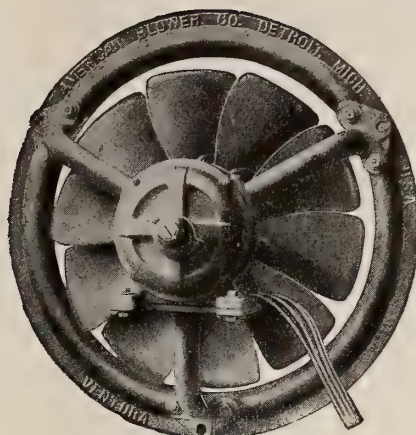
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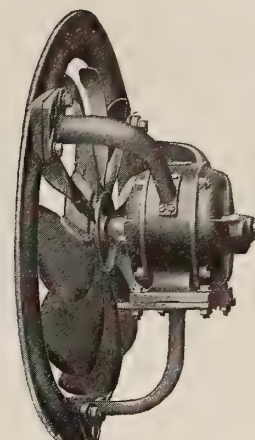
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Side View of Fan.
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Cost nothing to maintain

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ISSUED BY

The CANADIAN MANUFACTURERS ASSOCIATION.

INCORPORATED.

Vol. XVI

TORONTO, NOVEMBER, 1915

No. 7

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers Association (incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada

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Shortage of Labor.

AN extraordinary change has come over the labor situation in Canada since the outbreak of the war. A year ago the supply greatly exceeded the demand, and consequently there was much unemployment. Now, only the incurably indolent are without occupation. The army has taken about 170,000 men. The unusually heavy crop has absorbed all the available labor in the agricultural districts. Although construction work has greatly decreased since the outbreak of the war, there is still a considerable amount in progress in proportion to our population. Immigration is almost at a standstill. The revival in trade, which is being felt to some extent throughout Canada, has also affected the labor supply. The result, so far as manufacturers are concerned, is that some factories, particularly those engaged in the production of munitions, are finding it increasingly difficult to secure employees, especially skilled workers. In some districts the available territory is being searched, in some cases without a great deal of success. Now comes the statement from the Honorable Mr. Crothers, Minister of Labor, that this winter may see a serious shortage. The lumbermen are already finding difficulty in securing men

to go into the woods. It is hopeless to look to Europe for relief. The United States is no place to look for industrial recruits, according to *The American Metal Market*, the leading iron and steel journal of that country, which says:

"Serious labor shortages are now being reported from various industrial centres. Conditions can hardly be described as acute thus far, but it is quite certain that the labor supply is not altogether adequate for the present industrial activity. The shortage is not in a few spots, but is fairly general, in the coke regions, at blast furnaces and in steel mills. Having this situation now one must consider that it will grow worse, in all likelihood, from two influences, first, an increase in general industrial activity; second, a continuance of the failure of immigration to increase our population as it has been in the past, prior to the war."

In addition to the two causes mentioned above, Canada has a further cause—the steady drain of men into the army. In a few weeks farming operations will be practically over, and the consequent liberation of thousands of men should do much to replenish the shortage of labor in other industries. We hope that the energies of the military authorities will be directed more towards securing recruits from the agricultural districts during the next few months. We have now reached a point where great care should be taken in recruiting from factories, especially those engaged in the manufacture of munitions of war. A man who is making shells is doing his part just as much as though he were carrying a rifle; so is the factory worker who is making uniforms or any of the numerous articles which are now being demanded in great quantities by the military authorities. During the summer and fall, farmers have done noble service by producing the greatest crop in the history of Canada. They can continue their military service by coming forward in great numbers in answer to the call for recruits. In the back townships, in hundreds of little villages and cross-roads communities, there are thousands of men who will make the best soldiers if they can be convinced, or rather if their imaginations can be awakened, to the stern necessities of war. It is easy to create excitement and to arouse the imaginations of urban dwellers and, heretofore, the recruiting campaigns have been confined largely to towns and cities. It

is true a great many from the country districts and from the small villages have come into the towns and cities and enlisted, but not much effort has been put forth to secure them. Not many recruiting sergeants have been sent into the country to stay in the country and gradually work up enthusiasm. The factory is a much easier place for the recruiting sergeants' operations, and quicker and larger results have been secured in factory centres than in any other districts. We do not mean that recruiting efforts should be lessened in those factories which are not directly connected with the manufacture of munitions; let the work go on there, but let the munition-maker stay at his bench and let his place be filled by one whose labor is not so vitally important at the present crisis.

Mr. Asquith Supports Home Industry.

ONE of the strongest pleas for the support of home industry was made by Mr. Asquith recently in the House of Commons. During his speech he said:

"The intention and object with which these taxes are put forward is of a very different kind, and entirely without prejudice to the general question between free trade and what is called fiscal reform. The object—and a very important object—is, on the one hand, to diminish or discourage the consumption of superfluous or unnecessary commodities of a luxurious kind, but still more—and this, to my mind, is the really important point—to discourage unnecessary importation. In the conditions under which we now live everything that comes into this country from abroad which is not absolutely needed for the sustenance or carrying on of the industry of our population, involving, as it does, a corresponding obligation on us to export, tends still further to disturb and depress the exchanges, and therefore to embarrass the conduct of the war and the provision of the financial resources which are absolutely necessary for its successful prosecution."

Canada has carried to a greater extreme than almost any other country the reckless habit of buying more abroad than she sells. It is true that we are remedying our fault in this direction and that our formerly adverse trade balance is being rapidly transformed into a favorable trade balance. Our imports are falling and our exports are rising, but our imports are still too large. Consumers in Canada should take Mr. Asquith's advice and determine to buy goods made in their own country rather than to send abroad huge sums of money which are sorely needed at home.

Proposed Anti-Dumping Law in the United States.

AN agitation has begun in the United States to secure an anti-dumping clause in the tariff similar to that contained in the Canadian tariff. The anti-dumping clause in the Canadian tariff was inserted for the purpose of preventing the dumping of United States

or other foreign goods into Canada at greatly reduced prices during periods of depression. In pointing out this fact during a discussion of anti-dumping legislation, *The New York Journal of Commerce* makes such a good case, probably without intending to do so, for the policy of protection for Canada that we cannot refrain from reproducing it:

"On the general question of protection against 'dumping' the situation of the United States is quite different from that of Canada or South Africa. With Canada it was chiefly a feature of its protective policy to prevent the unloading in the Dominion markets of surplus goods from the United States at reduced prices. Canada, with its vast territory, has only about one-twelfth of the population of the United States. Its manufacturing industries are mainly in the stage of infancy or youthful adolescence, and located in the east contiguous to the most highly developed field of American industries. The United States has no reason to fear competition from nearby countries in its own markets, and its situation with reference to European competitors is quite different from that of Canada. Its industrial and commercial strength ought to be equal to that of any existing rivals, and the power of those in Europe now at war with each other will be greatly diminished instead of increased when their struggle is over. Why should we have more fear of their commercial rivalry than before?"

Briefly put, this argument may be summed up thus: United States industry is so powerful and so wealthy that it does not need protection against Canadian industry. Conversely, as Canadian industry is much less powerful and much less wealthy than United States industry, Canadian industry needs protection. We have seldom seen the case so clearly stated in a United States paper. It was this fact that defeated Reciprocity and other proposed trade arrangements which would have placed Canadian industry at a disadvantage in competing with United States industry.

The Eight-Hour Day.

IN an article which appears elsewhere in this issue, to which we direct the attention of our readers, it is shown how adversely the adoption of an eight-hour day would affect industry.

As there is a close relation between labor conditions in the United States and Canada, it is not unlikely that the recent widespread demand for an eight-hour day in the United States will be re-echoed in Canada. We do not believe that it will get much support at the present time. The recent South African elections show, among other things, that a nation very quickly tires of unreasonable and domineering demands of labor unions. People are beginning to realize that reduction in the hours of labor means reduction of output, with a consequent increase in the cost of living.

The Toronto Telegram and Technical Education.

THE *Toronto Telegram* prides itself on being a workingman's paper. It aspires to voice the sentiments of the workingman (too often the sentiment of the workingman with his foot on the hotel bar-rail) and professes to be warmly concerned with anything which affects the welfare of labor. It will be difficult to reconcile the professions of friendship to labor with the following editorial utterance which appeared recently in *The Telegram*:

"The Toronto branch of the Canadian Manufacturers Association was utilized by the gentlemen who loaded up the taxpayers of this city with the creation and maintenance of an industrial university in the form of a Technical School. The Toronto branch of the Canadian Manufacturers Association allowed its name to be used and its influence to be exerted by the lobby that placed a burden of almost \$1,500 per day on the shoulders of the taxpayers in the Technical School account."

This is the first spoken or written condemnation that we have heard or seen of the Toronto Technical School which has been constructed at considerable expense, it is true, but with great skill and real economy. The object of building this school was to provide facilities for increasing the skill of workmen and for improving the quality of their prospects. Manufacturers, co-operating as they do with their employees, will, of course, benefit in common with these employees from such increase in skill and improvement in quality. A considerable number of the taxpayers of Toronto are the people whose children will go to this school and will receive these advantages. The largest taxpayers in Toronto are the manufacturers, who are gladly contributing their share. The real estate interests, whose advertisements fill the columns of *The Telegram*, will scarcely suffer from any aid to industry which promises to increase the size of the city and the value of their holdings.

As more laborers should be attracted to the city by the opportunities which will be provided for the industrial education of their children, *The Telegram's* readers should be increased. When we consider the exalted position which *The Telegram* has arrogated to itself as the champion of the workingman, it is difficult to understand its attack upon industrial education and upon the body which did so much to provide it.

Federal Licenses for Companies.

WHAT the final decision will be in defining the respective jurisdictions of the Federal and Provincial Governments in regard to licensing companies will be known in the course of the next few months, as the case will soon go before the Privy Council. The result is awaited with great interest and considerable trepidation on the part of manufacturers. No doubt a strenuous

battle will be waged by the supporters of provincial rights, but there is little doubt in the minds of manufacturers that the interest of commercial companies, whether incorporated under Dominion charters or at present operating under Provincial charters, would best be served by a decision establishing the jurisdiction and control of the Federal Government of Canada over the chartering of companies for carrying on trade of a general or inter-provincial character. Commercial men will also be not unfavorable to the view that a company carrying on trade in more than one province ought to be incorporated under Dominion authority. They also believe that a company duly incorporated under Dominion authority ought to have assured status and authority to carry on trade in every province.

While the provinces undoubtedly secure considerable revenue from the control of the charters under which companies operate within their boundaries, it is a short-sighted policy to conclude that such revenues compensate for the restrictions and harrassing regulations which provincial control of charters entails. The task of conducting commercial enterprises in the thinly-populated vast areas of the Dominion is sufficiently difficult without adding artificial and unnecessary burdens in the shape of costly and conflicting legislation.

Domestic War Loan in Canada.

THE flotation of the loan in the United States to the British and French Governments tends to place the Canadian manufacturers under a further disadvantage in competing with United States manufacturers in the production of munitions of war. One of the difficulties encountered by the British Government in its evident desire to favor Canadian manufacturers as far as possible with war orders has been the financial problem connected with such purchases. Canada is borrowing great sums of money from Britain to meet her military expenses simultaneously with the transfer of other huge amounts to Canada in payment for Imperial purchases. The double drain is severely felt. On the other hand, the United States is lending Britain money to buy war material from the manufacturers of that country. The flotation of a domestic loan in Canada would enable our Government to pay our manufacturers and farmers for munitions of war used in equipping our own troops without borrowing from Great Britain. The sum thus liberated in Great Britain might be available to purchase articles for the use of the Imperial army.

Saskatchewan Exemptions Act.

THE objectionable amendment to The Exemptions Act, recently passed by the Legislature of Saskatchewan and described at length in the October issue of INDUSTRIAL CANADA, which practically wipes out all

chattel mortgage security in the Province, has alarmed the commercial interests of the Dominion. The banks, which were empowered to take chattel mortgages as security for past debts, are also affected and the consequence will be that the amount of credit heretofore extended to purchasers in the Province will be so greatly restricted that it will be necessary to transact business in future largely on a cash basis. In addition to this legislation the Saskatchewan Department of Agriculture has advised farmers to give preference to certain creditors in settling accounts. If anything is life the lumberman and machinery dealer will be paid. Although expressions of disapproval are appearing in papers throughout Canada, commercial men have not yet fully realized what this confiscatory and discriminatory legislation will mean to them. Steps should be taken immediately to bring the attention of the Federal Government to the danger of destroying chattel mortgage security and of restricting credit in Saskatchewan.

Employing Crippled Soldiers.

HOW to provide suitable work for incapacitated soldiers is a problem which is already confronting manufacturers and other employers. As a result of wounds and illness, many will be unable to follow their former occupation and some method must be found to save these men from the hardship of unemployment and to prevent them and their dependents from becoming a partial charge upon the country. They have suffered and have made great sacrifices and adequate provision must be made for them. The attention of manufacturers is being directed to the necessity of finding them employment, and local committees are being formed throughout Canada to deal with the problem.

Not a New Policy.

THE *Vancouver Sun* urges that a "New National Policy" is needed in Canada. The object of this policy would be to place on our vacant arable lands a part of the population which now finds it difficult to make a living in the city.

There is no doubt that there is room for millions of farmers on the available agricultural lands in this country. It is also true that the problem of seasonal unemployment could be solved to some extent by the successful transfer of city dwellers to the country. It is scarcely accurate, however, to call such a movement a "New National Policy." The National Policy, in the economic sense of the term, aimed at securing a perfect balance between the city and country. The city was to manufacture what the country needed and the country was to produce what the city needed. It is of little use transferring the great numbers of city dwellers to farm lands unless they are certain of a market for the articles they can produce. Industrial cities are the best markets for farm produce. The

National Policy never contemplated stripping country districts in order to swell city districts, because a large rural population is needed to absorb manufactured goods. It will be desirable for many years to encourage settlement on our vacant agricultural land and to bring it under cultivation, but it would be more accurate to say that this was only a continuation of the National Policy than to herald it as a "New National Policy."

Use Canadian Woods.

A PAMPHLET entitled "British Columbia Timber" has been prepared for distribution among buyers in overseas markets by the Forestry Branch of British Columbia. This pamphlet urges Canadians to specify British Columbia woods for the purpose of finishing the interiors of their houses instead of buying imported lumber. There is no doubt that a little energy and investigation by builders and owners would discover sufficient high grade woods in Canada to do nearly all our interior finishing. With our lumber industry depressed as a result of the curtailment in exports, every preference should be given to Canadian woods instead of to expensive foreign woods.

British Columbia and the Panama Canal.

IT seems possible that an amicable agreement will be reached in regard to the demands of British Columbia shippers to benefit by the Panama Canal. Negotiations between the shippers, the railways, the Government and the Canadian Manufacturers Association are in progress, and the spirit shown by the various representatives of these organizations during the deliberations promises a satisfactory solution. Whether the ultimate arrangements will include the appointment of a customs officer at New York to facilitate shipments from Eastern Canada via the Panama Canal is not yet settled. The question is a very difficult one and many interests must be considered.

The United States has learned to its cost that persistence in the demagogic practice of persecuting railways in order to secure public approbation invites disaster. Certain journals and public men in Canada, who always embrace the opportunity to sacrifice Canada to the United States in trade matters, to promote the doctrine of continentalism and to send money out of Canada into the hands of foreigners whenever possible, are urging hasty action without regarding interests of the country. The railways, which are to a certain extent national property, are among the best customers of Canadian farmers and manufacturers, buying millions of dollars worth of material annually. Since the Federal and Provincial Government are interested, and as much of the stock of the railways is held in Canada we should not lightly attack our own investments. Shippers must have service and service under existing conditions in Canada is costly.

The railroads, on the other hand, must recognize the competition of the Panama Canal and must be prepared to meet that competition as they have to meet inland water competition. The people of British Columbia have treated the railroads generously and it would be good policy for the railways to strain a point in order to solve the difficulty in some way which would be satisfactory to the shippers of that province.

Investigate Lumber Enquiries.

THAT a great many commission brokers have been flooding the lumber market with alleged enquiries which will not bear investigation is the statement made by the Secretary of the Canadian Lumbermen's Association, Ottawa. He claims that a request for specifications and other particulars usually ends negotiations in such cases. He says, however, that there is some demand for spruce, box shooks and portable houses. When in doubt members can secure accurate information by applying to the above address or to the Minister of Trade and Commerce, Ottawa.

Growth of United States Export Trade.

THE amazing growth of the United States export trade, owing to the almost unlimited demands of Europe, is exciting the wonder and envy of the rest of the world. For September the exports from the entire country amounted to \$297,766,000 as compared with \$156,052,000 for September last year. For the nine months between January first and September thirtieth, the total exports of merchandise amounted to \$2,530,000,000 as compared with \$1,467,000,000 during the same period last year. The excess of exports over imports for the nine months was \$1,228,000,000. The crisis in the exchange situation endangered this immense foreign trade until the successful flotation of the loan of the Allies averted danger. Now the exchange situation threatens to become again acute and the remedy proposed is another loan.

The New York *Annalist* published the following signed statement issued by fourteen prominent United States business men summarizing the arguments in favor of the first loan:

"1. That not one dollar of the money loaned will leave our shores.

2. That every dollar will go, directly or indirectly, to some American farmer, workingman, merchant, or manufacturer, in cash payment for foodstuffs, clothing, raw material, labor, and manufactured products that the English and French people need.

3. That there will be established in this country a commercial credit just as important to us as to England

and France because it will be used to increase our trade and permit the outflow of our surplus products.

4. That the country finally recognizes that, in order to further American trade, it must become a creditor nation, giving credit to any solvent and friendly nation that may be entitled to it."

There seems to be little doubt that further credits will be established, as the arguments still hold good. While all Canadians must rejoice to see Britain and France securing financial aid, we must face the fact that the establishment of large credits in the United States may affect our sale of munitions and products to Europe. If the United States lends the Allies money to buy goods from United States citizens, it is impossible to expect that Canadian producers will get the preference in war orders, regardless of how much the Allied Governments might desire to place them here. There is no alternative but to take with gratitude what war orders we can get from Britain and her allies.

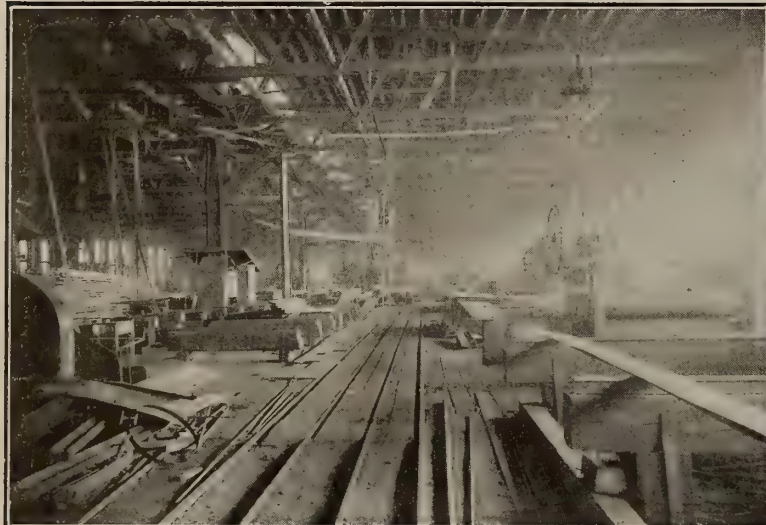
With regard to war orders for the Canadian forces, it might be well to state the position of our manufacturers in view of the discussion which has taken place on this subject.

The industrial equipment of the country is capable of producing war materials at a higher rate or in greater quantities than they have been hitherto produced. Extraordinary readjustments have been made and scores of factories have been transformed to meet the necessities of war. Canadian factories can execute with skill and despatch all war orders for Canadian troops.

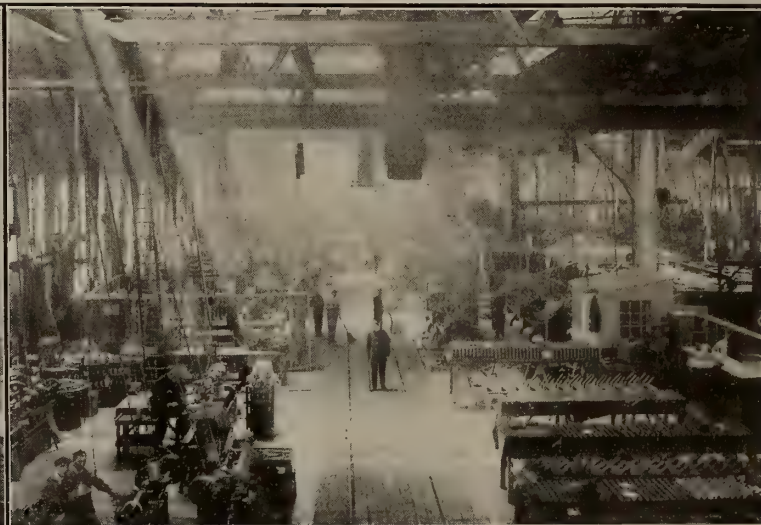
The Railway Situation in Canada.

IT is gratifying to see how the clouds which hung over Canadian railways a few months ago are rolling away. At that time the chief representatives of the railways went before the Dominion Railway Commission and stated that, owing to their falling revenues, it was absolutely necessary that they should increase their freight rates. The Canadian Manufacturers Association contended that the situation would improve and that the railways should show cause why such an increase was absolutely necessary. Now the earnings of the railways are going up by leaps and bounds and it seems as though they will be able to get on very well without any increase in rates. They have probably not yet reached the degree of prosperity of some of the railways in the United States, where the Central railroad was forced to declare an embargo against freight for a short time and the Southern Pacific had to refuse consignments for its vessels clearing from New Orleans and Galveston. The trend of events since the memorable appeal of the railways has justified the position taken by the Canadian Manufacturers Association on that occasion.

How Some Canadian Factories Make Shells



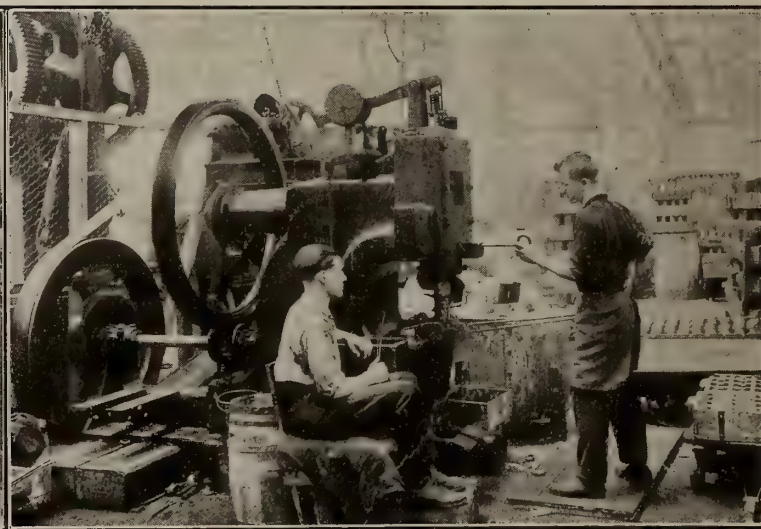
General View Before War



General View Now



Turning Shells



Nosing Shells



Assembling Shells



Government Inspection

The above photographs were taken in the plant of the Dominion Bridge Co., Limited, Montreal. They illustrate the transformation which has taken place in hundreds of Canadian factories since the

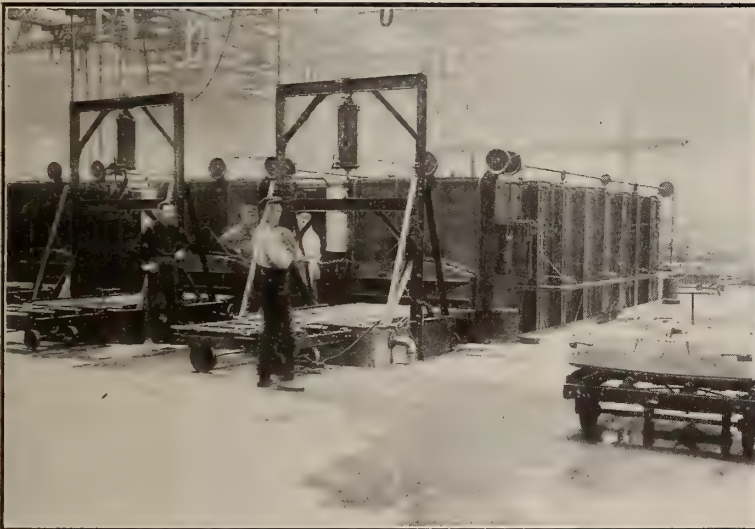
Adapting Industrial Plant to War Conditions



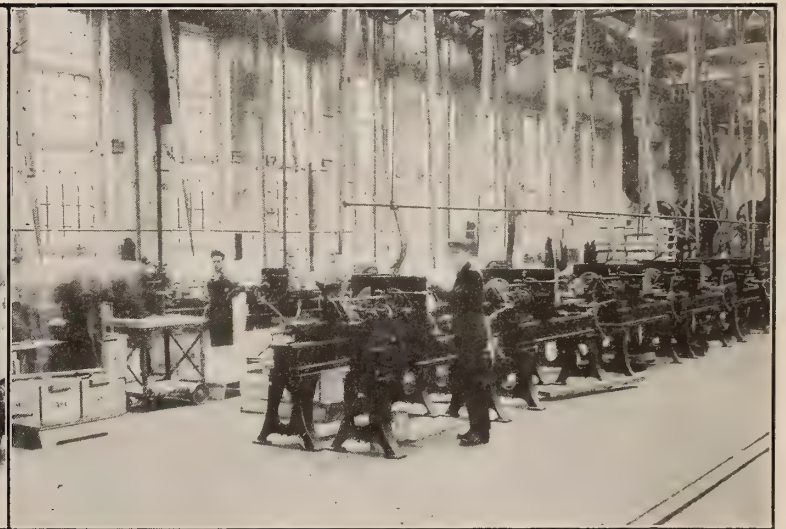
Painting Finished Shells



Drilling Blanks. High Explosives



Furnaces, Quenching Tanks and Trolleys



The Lathes at Work



Interior of New Shell Shop



Interior of New Shell Shop

outbreak of war. Our readjustment of the industrial conditions prevailing in times of peace to meet the necessities of war has been truly remarkable.

ILLUMINATION AND ONE YEAR'S ACCIDENTS*

Poor Lighting is the Cause or Contributing Cause of Nearly One-Fourth of all Factory Accidents

THERE is a widespread belief that approximately 500,000 avoidable industrial accidents occur in the United States, each year, and that about one-quarter of this number are caused directly or indirectly by improper lighting facilities. So far as can be learned, these figures are estimates made by persons who have considerable experience in accident-prevention work. There is little evidence to show that any extended systematic effort has been made to ascertain, accurately, the relation between light and accident rate. This is due to the want of statistical data, owing to the enormous labor and expense involved in obtaining such data.

The records of workmen's compensation and accident insurance companies offer a fruitful field for the study of accidents, provided careful attention is paid to details in the investigations. A few notes on the lighting arrangements will often explain the cause of an accident. The Travelers Insurance Company is particularly fortunate in having over 200 men who are specialists in accident-prevention work. A record is kept of every accident in and about factories, shops, and mills, carrying insurance with The Travelers, and all important accidents are investigated by the inspectors, who ascertain the conditions that prevailed at the time they occurred. The reports of these men form an authoritative library on the causation and prevention of industrial accidents, and among the causes, and also among the recommendations, the lighting question plays an important part.

All accidents incident to the use of automobiles, teams, bicycles, trolley cars, and slippery pavements are omitted, as well as all accidents occurring in and about coal mines.

Caused by Bad Lighting.

Excluding the classes of accidents that I have mentioned, there still remain more than 91,000 accidents which occurred in and about industrial plants; and of this number 23.8 per cent. were due, directly or indirectly, to the lack of proper illumination.

A further analysis of the record shows that 10 per cent. of the total industrial accidents for the year were due primarily to inadequate illumination, and that in the remaining 13.8 per cent. the lack of proper lighting facilities was a contributory cause.

Under the heading "direct cause" were included all accidents on stairways, in passageways, and in the shop, where it was shown that there was no light in the immediate vicinity. It is true that many persons have been injured by falling down stairways that were well lighted, where the illumination could have had no bearing on the accident; but it is likewise true that if none of the stairways in the country were provided with light, the accident rate from this cause would be vastly increased.

It may be interesting to cite a few typical cases where insufficient or improper illumination was a cause of an accident.

In a certain shop having widely-spaced lighting units a supporting column cast a shadow which hid a flat two-inch bar lying on the floor, and crossing a passageway at an angle. One of the front wheels of a truck encountered the bar, and the truck axle, swerving sharply to the right, jerked the handle out of the hand of the laborer who was hauling the

truck. The handle struck the right foot of a workman standing at the side of the passageway to let the truck pass, and broke one of the small bones in his foot. The sudden stopping of the truck also caused one of the heavy pipes upon it to roll off, and the truck handle, acting as a skid, guided the pipe against the workman's left leg, breaking both bones below the knee. It is evident that neither man saw the bar of iron on the floor—a fact which is easily understood when one considers that the floor and the bar were both dark-colored, and further obliterated by the shadow. It is fair to assume that if adequate light had been provided the laborer would have seen the bar, and would have removed it instead of attempting to pull a heavy truck over it.

Light Cheaper than Damages.

A paper-mill employee, while feeding a conveyer with short pieces of pulp wood, noticed that the chute at the other end of the conveyer had become clogged. There was no light at the chute, yet the man attempted to clear the way, after stopping the conveyer, and while thus engaged a block of wood slipped out and broke his ankle. There was no occasion for any of the workmen to use this part of the mill, unless the conveyer or the material caused trouble. This, however, was just the time light was needed and none was provided. The amount of money required to maintain a unit affording ample illumination at this point is negligible when compared with the amount of the claim paid to the injured workman—in fact, such a unit could have been kept burning all day, and every day for a hundred years, and still the owner would have realized a handsome profit, and one employee, at least, would also have been saved from injury.

The following two instances represent conditions often seen in certain industries. In the first one, a man fell into a tank containing hot water and acid, and was fatally burned. A number of tanks were placed close together, with narrow walks between them at the top. There were no guard-rails along these walks, and no artificial light was provided, even though the presence of workmen at this point was necessary at odd times of the day. The accident happened just before quitting time in the latter part of December. In the other instance the natural light was not adequate, and was supplemented by incandescent lamps. Both the lamps and the windows had a thick coating of grease and dirt, so that by no stretch of the imagination could the illumination be called other than very bad. Nor were there any guard-rails along the walk at the top of the vats containing scalding water. It is not to be wondered at, therefore, that a workman made a misstep and was scalded to death.

In another case lack of light in the hold of a vessel was responsible, without doubt, for the crushing of a foot. A workman was piling pig iron there, in semi-darkness—the open hatch, far above, admitting so little light that he could not see that the pile was uneven. While he was still at work the pile toppled over and injured him as stated. Under exactly similar conditions another workman could not see that a hook was insecurely caught in a bale of cotton that was to be hoisted from the hold of a steamer, and when the hook slipped the falling bale struck the man a glancing blow, breaking his collar bone. In this case the difference of a few inches in the man's position was all the margin there was between injury and death.

* From a paper read before the Illuminating Engineering Society by Mr. R. E. Simpson of the Travelers Insurance Company.

Dark Winter Days.

In the punch-press room of a certain factory an overhead skylight provided plenty of illumination on bright days, but in the winter months, and especially on grey, cloudy days, the daylight illumination was so much reduced as to occasion repeated requests for auxiliary artificial light; and an injured workman based his claim for damages on the ground that the employer had failed to provide sufficient illumination.

Two steam-fitters, having finished some work on a temporary platform nine feet above the floor, instructed a laborer to remove all supplies and tools from it. The steam-fitters had used an extension-cord drop-light, which they took away with them, thus compelling the laborer to depend upon the reflected light from the units below him. He failed to see a short piece of steam pipe, which soon afterward fell and fractured the skull of a workman below. This is the type of accident generally classed under the item of "struck by falling material." It is probable that if sufficient illumination had been provided the laborer would have seen the pipe and taken it away with the other material, thereby preventing the accident; and under the circumstances it is fair to state that the lack of illumination was a contributory cause.

Two trucks being pushed in opposite directions collided on an overhead bridge, and both truckmen were injured by material falling from the trucks. The noise in adjoining shops, in addition to that caused by the trucks themselves, prevented either truckman from hearing the approach of the other one. The covered bridge had side windows, but no other means of providing light; and as the accident occurred late in the afternoon in January, the lack of light, plus the noise, was responsible.

A machine with four saws on one shaft was well guarded, but the drop-light had been so arranged by the operator that one of the guards cast a deceiving shadow. The man was badly injured by placing his hand on the shadow, when he thought he was placing it on the guard. This was purely a case of improper lighting, and it points out the hazard in the practice of permitting a workman to adjust the lighting units to suit his own convenience, instead of having them placed by a lighting expert.

A Fool and His Collar.

A workman using an extension-cord light found it necessary to use both hands for something or other, and he therefore made a loop of the lamp cord and hung it about his neck. The worn-out insulation of the cord allowed sufficient arcing to set fire to the man's celluloid collar, causing extremely painful burns about the neck and head. In this, as in most other accidents, a great many "ifs" might be thought of; but none of them can hide the fact that there were no permanent means of lighting the section of the shop in which this particular accident occurred.

There were several cases where inadequate illumination had impaired workmen's vision, so that these men were subsequently injured while working under lighting conditions that were excellent for normal vision. Their claim that their injuries were due to insufficient lighting was hardly justifiable when applied to the last working place, but it is certain that the impairment of their eyesight due to the poor lighting at their previous workplace had an important bearing on the case.

The Dangerous Months.

Fifty-one per cent. of the accidents due to poor illumination occurred in the months of November, December, January, and February, while 48.4 per cent. occurred in the remaining eight months. This indicates that the likelihood of an accident being caused by poor lighting is more than twice as

great in any one of these four months as in any one of the remaining eight months.

Understanding the Use of Light.

An examination of a few of this year's reports shows at least one very promising tendency, inasmuch as general expressions such as "no light" or "insufficient light" were commonly used, five years ago, in describing the cause of an accident, whereas at the present time we meet with much more definite statements, such as "improperly-placed lighting units," or "low-hanging, unshaded lamps." From this we may gather the cheering information that the workmen are gradually appreciating the vast difference between light and illumination. It might be expected that fanciful claims will be made, such as that put forth by an injured workman to the effect that the actinic rays of the lighting unit impaired his vision. The lighting unit in question was a 16-candle-power carbon lamp equipped with a bowl-shaped aluminum-finish reflector.

A statement has been made to the effect that the introduction of the high-efficiency lighting units was the largest single factor for the increase of accidents in our industries during the period of artificial lighting. This statement is not to be taken as a condemnation of these lighting units, but rather as a protest against the common method of using them. There are thousands of small manufacturing establishments in this country, each occupying a single floor or perhaps only part of a floor, and in many of these cases the owners have had the floor on which they are located wired and connected for central station electric service, or piped for gas service. They have procured incandescent lamps, gas tips, or mantles, as the case might be, and used them without proper accessories. Of diffusing glass, reflector equipment, mounting height, and other fundamentals of good lighting they either know nothing or care nothing. The workmen adjust the units so that they can "see,"—the adjustment usually consisting in placing the lighting unit close to the work, very often between the man and the work, and almost always in direct line of vision. The carbon lamp or the open-flame gas light contributed a distinct hazard under these conditions, and this particular hazard was greatly increased when the high-efficiency incandescent gas mantle and electric lamp were substituted without any other change being made at the same time.

Lack of Expert Advice.

In the majority of cases the meterman is the only public utility representative to visit these small manufacturing concerns, and little or no advice on the lighting conditions is given by these men. The consulting engineer or lighting expert is seldom, if ever, called in to give advice on installations where the total connected lighting load is in the neighborhood of one kilowatt. In the larger manufacturing plants the lighting bill will bear about the same proportional relation to overhead expense as it does in the small shop, although the bill itself will be many times larger. Economy has usually influenced the management of large plants in securing expert advice on the lighting problem, with a noticeable improvement in the illumination. This in a measure accounts for the modern lighting equipment in the large plants, and it also shows why they compare so favorably with the small establishments. A workman may be just as seriously injured in a small shop as in a large one, however; and the accident rate due to the lighting conditions is likely, in fact, to be higher in the small shop than in a large one doing the same class of work.

In the past year the "Mazda C" lamp has become an established commercial product in a constantly increasing range of sizes for multiple circuits. The concentrated fila-

ment of the "Mazda C" lamp (which more nearly approaches a point source), coupled with its higher intrinsic brilliance as compared with other Mazda lamps, makes the use of reflectors exceedingly important. Manufacturers earnestly insist that users equip these lamps with proper reflectors, but unfortunately this advice is not always followed. In some instances shallow dome-type reflectors were used with the vacuum-type Mazda lamp, and when "Mazda C" lamps were substituted no change was made with respect to the reflector

equipment or mounting height, *even though the light sources came within the range of vision.* Excellent results in the way of diffusion and distribution can be and have been obtained by the use of the dome-type reflector with the "Mazda C" lamp; but from the safety standpoint they should never be used together, unless the mounting height is such as to preclude any possibility of the lighting source being within the range of vision. Unless this principle is followed, it is inevitable that the eyesight of the workmen will be impaired.

BUSINESS FAILURES REPORTED TO BRADSTREETS, IN CANADA AND NEWFOUNDLAND, FOR NINE MONTHS OF 1915 AND 1914, WITH ASSETS AND LIABILITIES.

PROVINCES	NO. OF FAILURES		ASSETS		LIABILITIES	
	1915	1914	1915	1914	1915	1914
Ontario	532	438	\$2,331,728	\$2,514,296	\$4,365,772	\$5,211,262
Quebec	603	488	3,863,827	2,630,836	9,387,338	5,214,314
New Brunswick	35	27	57,057	124,100	134,353	269,375
Nova Scotia	53	23	129,286	435,695	238,593	833,623
Prince Edward Island	1	2	22,500	29,400	27,500	38,700
Manitoba	217	214	671,536	441,203	2,313,886	1,220,435
Alberta	175	181	622,801	720,214	1,278,528	1,248,171
Saskatchewan	198	227	675,003	931,629	1,950,857	2,326,544
British Columbia	201	277	2,246,190	1,424,850	4,142,777	3,216,662
Yukon Territory .....	....	....	.....	.....	.....	.....
TOTAL, CANADA	2,015	1,877	\$10,619,946	\$9,252,223	\$23,839,604	\$19,579,086
NEWFOUNDLAND	2	3	105,000	19,230	210,189	45,134
ST. PIERRE ET MIQUELON .....	....	....	.....	.....	.....	.....

ADVERTISING BRITISH COLUMBIA LUMBER.

In the market extension work which is being conducted on behalf of the lumber industry by the Hon. W. R. Ross, the export propaganda has naturally attracted most attention from the public on account of the immediate results secured. As is well known no less than thirty million feet of lumber is being shipped on vessels especially secured for this purpose, this quantity representing little less than the total provincial export for 1914. The gratifying feature of this business is the large proportion of low grades that have been marketed. As far as the lumber market for Douglas fir is concerned, Mr. Ross's department during the past few months has acted in conjunction with the industry in handling a very considerable volume of business.

Another recent matter of interest has been the issue of the pamphlet dealing with British Columbia timbers, which is one of a series designed to inform the foreign buyer fully concerning the qualities and uses of British Columbia woods and to assist in establishing new trade connections for our lumber industry abroad.

Another pamphlet of value to the British Columbia manufacturer in this market has been one entitled "How to Finish British Columbia Timber," the object of which is to push the use of our western woods for interior finish. It is planned to continue this missionary work in the East by establishing a branch office and exhibit in Toronto, and thus to ensure that architects, contractors, government departments and municipal bodies in the East are made fully cognizant of the advantages of using British Columbia woods.

In the Prairie Provinces the work has been vigorously taken up along similar lines. A permanent exhibit has just been placed in a prominent position in the Industrial Bureau in Winnipeg, which will show in an effective manner the many forest products of this province which are, or which should be, marketed in the prairie provinces. Other exhibits will be prepared for annual fairs and travelling exhibitions

in co-operation with prairie agricultural associations. The publicity campaign to increase the consumption of British Columbia lumber by the prairie farmer is, however, the main line of work. In co-operative agreement with the agricultural authorities in Saskatchewan a series of bulletins dealing with farm buildings have been in course of preparation. Temporary work by officials of the Department has been carried on in the Prairie Provinces since April last, and this is now to be continued by the establishment of a branch office located at a central prairie point. By personal work on the ground this office will supervise and follow up the general publicity campaign designed to increase the consumption of British Columbia lumber on the prairies just as the sale of British Columbia fruits has been pushed by the provincial authorities. Through co-operation with the lumber manufacturers of this province and their salesmen on the prairies every opportunity of increasing the sale of British Columbia lumber will be taken advantage of.

TIMBER SALES IN BRITISH COLUMBIA.

The timber returns for the month of August, issued by direction of the Minister of Lands, show that the total output of sawlogs for the Province, as shown by the scaling returns, amounts to 64,257,966 feet board measure, in addition to 71,383 lineal feet of piles and poles, and 8,329 cords of railway ties, shingle bolts, fenceposts and cordwood. Of this total there were exported 13,984,874 feet of sawlogs, of which 13,302,413 feet of sawlogs was from the Vancouver District; also 5,320 lineal feet of piles and poles, all of which were exported from the Island District.

Timber sales recorded during the month cover an estimated total of 10,100,857 feet of sawlogs, 85,000 lineal feet of piles and poles, and 1,234 cords of pulpwood, cordwood, etc., the estimated revenue from this source amounting to \$18,160.36.

THE EIGHT-HOUR DAY*

A General Eight-Hour Day Would Paralyze Industry and the Heaviest Loss Would Eventually Fall on the Worker

THE industrial world is confronted with a grave problem in the demand of some of the unions that the working day shall be limited to eight hours. In several parts of the country, and in a large number of mills and shops this demand has been formulated and presented to the employers, and in some instances the men have gone on strike to enforce their demands. There are reports from many other sections of the country that agitators are at work trying to induce the working men to strike for an eight-hour day. Throughout the various unions there is a feeling of unrest inspired by the suggestion from leaders or other interested parties that the present is the time for bringing about a change in working hours. Fortunately, this propaganda has not spread throughout the country yet, and there is some evidence that common sense will interfere to prevent wholesale strikes, or the compelling of employers to grant demands which must ultimately prove a serious menace to the industrial life of the country.

There is, of course, a sentimental proposition involved in the idea of an eight-hour day, and part of the strength of the labor unions in trying to bring about such a condition of labor is the sympathy founded on a bare generality which many persons feel for anything which will mitigate the hardships of labor, increase pay or make living conditions better. This is merely an expression of sentimentality which is not warranted by facts. The contrary view would be more nearly correct because it is a fundamental fact that a universal eight-hour day in the United States imposed on industry under present conditions would bring about not merely depression and lack of employment, but would, if it were possible to keep industries running, so increase the cost of living that the chief sufferer would be the working man and his family.

The eight-hour day is an economic and industrial impossibility, except in specific instances, and these instances simply verify and emphasize the fact that the hours of labor change as economic conditions change, and the change cannot be brought about artificially in any other way.

This country during the past two years has been suffering from industrial depression, and it is not so long ago since the Government, as well as special bodies throughout the country, were making a special investigation of labor conditions with the purpose in view of finding some solution of the tremendous problem of unemployment which then and which now confronts the country. It was stated officially that millions of men were without employment, indicating that the industries of the United States were doing only a small part of their normal work, and that their output was extremely limited. Then came the war with its many problems involving ourselves both politically, financially and industrially. The demands of the belligerents created orders for munitions of war and supplies for the armies in the field. Contracts were made and money was spent lavishly in certain industries in order to fill these contracts which were more or less profitable. In this way the industrial condition of the country became, as it were, spotted with these stimulating contracts, which, however, were merely of a special limited character, and which could not by any stretch of the imagination conduce to the general improvement of industry throughout the country. The factories and mills which were turning out these

products demanded more labor, and increased their capacity, giving employment along certain lines and necessitating overtime work.

Certain agitators of the labor unions for one reason or another, whether with or without extraneous influence, seized upon this situation to make demands for an eight-hour day and also for increased wages. These demands were made in plants which had large contracts and which were making, or supposed to be making, large profits. The ephemeral character of the contracts and the profits was not considered by the labor men. They did not want to secure a part of these profits through overtime wages, such overtime payments being largely in excess of any heretofore paid; but, they sought to utilize the urgent and emergency character of the work as a basis for compelling the adoption of an eight-hour day.

This illustrates the conditions of a few months ago and of to-day. There is apparently no thought in the minds of those who are conducting this agitation of what the future is to bring. The country has not recovered from its depression. There are very few industries which are working under normal conditions. There is not much indication of improvement, and we are further confronted with the fact that the end of the war will mean the beginning of a period of international competition without parallel in the history of the world. Every European country engaged in the war will make it its first duty to try and regain the trade which it has lost because of the war. The home market will be limited because of the tremendous loss of life and the decreased purchasing power of those who are living. The aim of the Governments will be to foster and aid in every way manufactures, primarily for export, and the Governments will wherever possible extend financial assistance in the campaign for the recapture of the world's market.

The United States will be the great market, and Europe will manufacture its goods under conditions which will mean their delivery in the United States at an extremely low figure. In fact, goods will be exported to this country and laid down for sale here at a figure with which our domestic manufactures could not compete. What will be the result for the industries of the United States, if the hours of labor are decreased from 10 to 25 per cent.? The answer is obvious. It would result in the capture of the markets of this country by Europe, and the destruction of our American industries.

This is not a fanciful picture. Rather is it a presentation of a hard fact which cannot be controverted, but which can be emphasized by figures and records.

The enforcement of an eight-hour day at the present time will mean the loss of American markets and foreign markets to the American manufacturer. This will mean industrial depression which in turn spells unemployment and hard times.

It does not seem credible that labor can be so short-sighted that it will not realize that its own best interests are bound up with those of the prosperity of the country, and that decreased efficiency, decreased productivity and increased cost of manufacture means not only increased cost of living, but loss of the wherewithal to live at all—wages that are reasonably certain from year to year.

Bound up with the problem of human life is the duty of work to be done and the economic duty of doing all the work that should be done under the conditions which make that work the most effective. The prosperity of employer and

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employee are largely reciprocal. Under certain circumstances a shorter day may produce greater effectiveness, but, ordinarily, a man must compete with his neighbor, and when a man with a costly equipment is working eight hours and his neighbor is working ten hours, the first is deprived of the use of a costly equipment for 20 per cent. of the time, that is, he works 20 per cent. less than his neighbor with an equipment which costs in dollars and cents perhaps the same or more. This question of increased efficiency because of shorter hours is merely a theory which cannot be substantiated. The saying of Emerson that "Mankind is as lazy as it dares to be" has a very apt application to the suggestion of increased efficiency through decreased hours. It may be readily admitted that where the working day is reduced from ten hours to eight hours, there is a loss of productiveness of two full hours, and this fact cannot be gotten away from.

The suggestion of an eight-hour day raises one definite economic question: Will the total output warrant the lessening of effective toil? In other words, can society sustain itself and make progress on eight hours' work? It is the opinion of those who have made a study of the situation, even including wage-earners themselves, that the output will most assuredly decrease in proportion to the decrease in hours of labor.

According to the census there are at present about 30,000,000 workers in the United States, including all over the age of ten. Figures submitted by the Secretary of the American Federation of Labor show that in 1912 there were about 1,847,000 persons working under an eight-hour basis in the United States, and of this number 475,000 were either Federal, state, county or municipal employees. Therefore, there were less than 1,400,000 of the general workers of the country operating on an eight-hour basis. This number should be compared with the 30,000,000 of workers in the whole country whose hours range from nine to twelve, or sometimes more, in farm work. The loss in productive energy by a reduction of one, or two, or three hours a day in the work of 28,000,000 workers in the United States may possibly be imagined, but it is almost impossible to reduce it to dollars and cents in the matter of actual loss of productive capacity.

It must be remembered also that the demand for an eight-hour day is not coupled with any promise that the men will require only the proportionate wages equivalent to the decrease in time which they are employed. Those men who are making a demand for an eight-hour day want the same wages for the eight hours as they received for a nine or ten-hour day. Therefore, there is no decrease in labor cost to offset the decrease in productivity.

A very frank statement was made before a committee of the United States Senate in the Sixty-second Congress, by one of the employees of a large factory at Moline. It is worth quoting:

"None of the men wants to work eight hours unless they can get ten hours' pay for it," this man said; "in fact, they would not get enough money to live on or to get along on on eight hours' pay. We are working nine hours at the present time, but that cuts off all the way from twenty-five to seventy-five cents perhaps on a man's wages, and of course that is quite a cut. With the conditions as they are in the way of expense of living, every man would like to see the ten-hour pay go on on that account."

Another thing that makes the present demand for an eight-hour day objectionable is the fact that the workman to-day does not have to labor in the same way that he did fifteen or twenty or twenty-five years ago. There is very little hard manual labor because the greater part of the work is done by machinery. The whole tendency of the present and recent

years has been to eliminate hard manual labor, and power devices have been installed which have made the work comparatively easy. In some industries the large proportion of all cost is labor cost. In fact, in some the labor cost is as high as 75 per cent. Where an eight-hour day is enforced in such a factory there is not merely an increase in labor cost, but 25 per cent. of the investment represented in the works is idle.

During an investigation by Congress this situation was very clearly presented by Joseph Wright Powell, of Cramp & Sons' Shipbuilding Company of Philadelphia. In explaining this situation, he said:

"The entire industry represents a capital of considerably over \$50,000,000, and of all the yards on the coast of this country not one has paid a dividend since 1901 with the exception of a single return which was paid last year by one company, and that was a special line. In other words, there has been \$50,000,000 of capital which has been paying to labor an average weekly payroll of not far from \$200,000 and the capital invested has had not one cent of return. At the present time the company and its allied companies are working ten and one-quarter hours for five days in the week and five hours on Saturday, making a fifty-six and a quarter hour week. The general disposition of our workmen is to make all the overtime they can. I have yet to know of a case where the exigencies of the work required it that there was the slightest difficulty in obtaining the services of any of our men whom we wanted to work nights, Sundays or holidays. Of course we pay the usual extra premium for this extra work, but to shut off the right of the workman to work such hours as he chooses is not only to take away from him an important means for obtaining extra compensation for his services; but it comes from our point of view pretty near to interfering 'with rights that we think ought not to be controlled by legislation.'"

It can readily be understood that in this company if the hours of work were reduced from fifty-six and one-quarter to forty-eight hours a week there would be still less chance of any return on the \$50,000,000 invested.

There is no better illustration of the effect of the eight-hour day on contract work than exhibited when the State of New York desired to build some ferry boats for itself. Shortly after the passage of the eight-hour law in New York, the State took over the Staten Island Ferry and decided to build five new ferry boats. At that time there were two plants in the City of New York that could build those boats, but these two plants, under the eight-hour law of the State, had to be sure that no one employed on the boats worked more than eight hours. The result was that out-of-town concerns which could work ten hours underbid the two New York companies by 20 per cent., and got the contract.

Another illustration of the effect of the eight-hour day is found in the building of the battleships *Utah* and *Florida*. They were sister ships and identical in practically every way. The *Florida* was built in a Government yard, the *Utah* was built by private contract with no eight-hour limitation, was finished seven months sooner than the *Florida* and at a cost of nearly \$2,400,000 less.

Reverting for a moment to the suggestion that conditions of labor to-day are such that it makes no difference in the physical strain on a man whether he works eight hours or ten hours, it was pointed out to Congress by an expert witness that the machines do practically all the work under present conditions, and that the men are merely directing units. This witness was Wallace Downey, of the National Metal Trades Association, and he made this interesting point:

"The theory of a great many writers and talkers on the labor side is that a man will do as much work in eight hours

as he will in ten hours because with eight hours' labor he does not become exhausted. That argument applied a few years ago, but does not apply to-day; because, as I have suggested, tens of thousands of machine tools are being operated, hundreds of thousands of them, I should say, and men are standing alongside of them watching the piece go through the tool, holding a piece of waste in their hands, and they are doing everything they ought to do, and they are doing it splendidly. That machine tool, gentlemen, is turning just so many times a minute, and it is running just as fast as it can be run without tearing it to pieces, and if anyone says to you that the man will produce just as much in eight hours as he will in ten hours, you will be sure that that is not so because, roughly, 80 per cent. of all the manufacture labor are standing watching those machine tools. The speed of the tool does it, not the man, and whether the man stands there one or two hours more it is not going to exhaust him; but, if he stops the tool, he is going to stop the production in the United States that much."

In connection with this it must also be remembered that whether the men work ten hours or eight hours the overhead charges go on just the same; salaries, depreciation of plant and other fixed charges go ahead just the same under an eight-hour day as under a ten-hour day. But, when the machine tools are limited to eight hours a day, the goods which are turned out must cost more money, and will cost more to the ultimate consumer.

At the present time this country has one of the greatest opportunities in its history for building up its foreign trade. South America is being watched particularly and studied in the hope of securing a substantial part of the trade which originally went to Europe. If our foreign exports are approximately \$2,000,000,000 a year, it may be estimated in round numbers that about \$1,000,000,000 of these exports consist of manufactured goods. If we export \$1,000,000,000 worth of manufactured goods from this country now, and we have been doing it heretofore, and if for any reason we stop that export of \$1,000,000,000 of manufactured goods, 80 per cent. of that, which represents payroll money, will come out of the pockets of the working man. That is obvious. It is not sentimental or theoretical. It is a fact. Can the workingmen of the United States afford that? It is very plain that they cannot.

The enforcement of an eight-hour working day under present industrial conditions, and in the face of impending international competition, would mean the loss of a large part of our exports. We could not sell our goods at a price that would mean any profit in the foreign market if a universal eight-hour day is to be enforced. The workingman gets his pay no matter what else happens, so long as the manufacturing concerns are running. Even if the plants go into the hands of a receiver the law says that the wages of the workingman must be paid if there is enough left, or if the property is worth enough to pay them. The workingman never loses his day's wage, while the manufacturer may be wiped out financially. But if by the demands of the workingman the manufacturer is wiped out financially, and the plant closes, the greatest sufferer is the working man himself.

This question of the increased cost of living is very intimately associated with the proposed decrease in the working day. The cost of living has been increasing steadily for years, and it is obvious that we shall never have the cost of living as low as it was fifteen or twenty years ago. The eight-hour day will affect every department of life. It will increase the expense of the manufacturer obviously. With 365 days in the year there are about 300 days of work. But the manufacturer pays interest for 365 days of the time. If another sixty days is taken out on account of the reduction in hours,

there will then be only 240 days of work in which to meet the overhead expenses of 360. This will increase the cost of operation to the manufacturer, who will charge the added cost to the consumer. For example, the added cost of railroad repairs and expenses will necessarily increase the cost of transportation—increase the cost of carrying goods from the farmer or the manufacturer to the merchant or the consumer. The consumer will have to pay it. Through every walk of life the eight-hour day will increase the cost of living, and the wives of workingmen who manage the home will be the first to find that the eight-hour day means a heavy decrease in the purchasing power of the weekly or monthly wage.

The National Civic Federation recently made an investigation of the people's income in order to determine approximately how much goes to labor and how much to capital. The report of the committee shows that in general, after miscellaneous expenses and the cost of materials or supplies are deducted, two-thirds of the earnings go to wage-earners and one-third goes to capital, but out of this third the capitalist must provide for depreciation. The statistics consulted covered the labors of more than 25 per cent. of the gainfully employed, or nearly ten million wage-earners. It excludes farm laborers. The committee took the position that the value of each worker is the difference between the gross value of his product and the cost of material, and not the gross value alone. It points out that the wage workers' value in 1899 was \$1,025, the difference between the gross value of his products, \$2,420 and \$1,395, the cost. The manufacturer must pay taxes, advertising, rents, royalties, insurance, travelling agents, etc., and his payroll, before he can figure on his share. Deducting such expenses, there was in 1899 a fund of \$889 per employee to be divided. Of this, \$590, or 66.4 per cent., went to labor, and \$299, or 33.6 per cent., to capital.

Comparing the census records for the last sixty years, and allowing for changes in methods of taking it, the committee concluded that the average annual wage in manufacturing industries has increased from \$247 to \$518 in sixty years, and the normal rate of interest has decreased one-fourth. These figures and facts indicate what a large interest labor has in the maintenance of the industrial situation on a safe basis in this country, and also shows who will be the chief sufferer if by the enforcement of an uneconomic eight-hour day industry is paralyzed or depressed.

A Government commission in Nova Scotia was created in 1908 to inquire into and report upon the economic effect of a limit to a working day for the workmen employed in the various industries in the Province of Nova Scotia. The following excerpt from the report of the commission is significant:

"A general and compulsory provincial eight-hour law would be at present a vital blow to the industrial prospects of Nova Scotia. Such industries as fishing, farming and lumbering are not suitable for such legislation, and this applies also to dock and wharf labor and to shipping. The manufacturing industries will be put by a merely provincial law under great disadvantage in competing with those of the other provinces."

New Zealand has an almost universal eight-hour day. In the bulletin of the United States Bureau of Labor for November, 1913, conditions in New Zealand are exhaustively discussed. According to this report the New Zealand workmen in general did about 30 per cent. less work than the American. American shoe factory operatives produced more than double those in New Zealand in the same time. The bricklayer lays from 350 to 400 bricks a day. In 1900 the average output of the New Zealand worker in certain specified industries was \$772. The output of a Massachusetts worker in the same industry, \$903, and of an Ohio worker, \$975. The average

wages of the New Zealand worker in the same industries, and for the same year, were \$350; of the Massachusetts worker, \$440, and of the Ohio worker, \$447. In other words, the difference between the wages of the New Zealand worker and those of the American worker corresponds with the difference in their productive capacity.

The eight-hour day involves a proportionate decrease in the production capacity of each workman. This in turn means a higher labor cost and a consequent higher cost of production inevitably resulting in higher prices for goods and the lessening of the ability of our manufacturers to compete in the markets of the world. The restriction upon the productive capacity of the workmen will not result in securing employment for the unemployed or in increasing the profits of

industries. It will directly tend to do the opposite of these things.

There is involved in this question of the eight-hour day the serious one of our industrial expansion, or the maintenance of our present industrial status. Labor will not benefit but will suffer from the enforcement of an eight-hour day because it will paralyze industry and so increase the cost of living as to make the condition of the workingman almost intolerable. It will restrict our industrial increase, will deprive us of foreign markets, and will in time make it easier for the control of our domestic market by the foreign manufacturer. Surely this is a serious situation and one which the common sense of the country and the common sense of labor itself will not permit to exist.

TRANSPORTATION

Transportation Problem by Land and Water.

THE following memorandum has been presented to the Vancouver Board of Trade by the Transportation Committee of the Canadian Manufacturers Association:

A great deal has been said with respect to a steamship service from New York to British Columbia via the Panama Canal, by which could be handled Canadian goods at very much lower rates than are charged by the transcontinental railways. To do this it requires under the Canadian Customs regulations a customs officer stationed at New York.

In opposition to making this cheaper route available to Canadian shippers there have been offered two reasons or excuses:

1st. It would be throwing the trade largely into the hands of another country.

This may be taken as the argument of the transcontinental railway companies. It is hardly a consistent position to assume, considering their business is international, and that they are to-day largely dependent upon the United States for their traffic for the transcontinental lines, as also for the eastern lines running through Ontario and Quebec. This applies not alone to freight traffic, but to passenger, express and telegraph as well. The trans-Pacific trade to China and Japan and Australia was built up largely on United States traffic, to secure which it has been necessary to have U. S. customs officers placed at Canadian ports. Portland, Maine, has always been the chief port through which the Grand Trunk handled its export and import business. The question, therefore, as to what port traffic moves through, is largely a question of convenience to the railways. The reciprocal bonding arrangement between the United States and Canada is in favor of the Canadian railways. The argument advanced is consequently not a good one to use. The railway companies could not offer any argument against a steamship service from a Canadian port, but they would, nevertheless, be equally opposed to it, and will as far as possible prevent it.

There are physical disabilities in operating from a Canadian port to British Columbia. From Montreal the distance is much greater, and it is only open during the summer season. From St. John and Halifax the distance is also greater, in addition to which the rail rates, from shipping points west thereof to these ports, necessary to pay would add a great deal to the Panama rates which otherwise would be saved.

The railways both in the United States and Canada were opposed to the construction of the Panama Canal at the out-

set, but notwithstanding this strong opposition it was built, the object being to bring the East and the West closer together by water rates; and also to provide a shorter and cheaper route for their export and import trade with other countries, and the Government was careful to incorporate in the Panama Canal Bill a clause preventing any railway owning or operating steamers through the Canal, with the object of eliminating all railway influence over the matter of rates. A tremendous increase in shipping has resulted at all the Pacific coast ports on the American side, and consumers are able to get their goods at much lower prices, while we in British Columbia are confined to using the railways, either Canadian or American. In consequence, it costs us more to do business, and more to live, than our competitors across the line, and they are gradually eating into the trade of our jobbers and manufacturers. It is natural for trade to move through the cheapest channel. This cheaper channel is not available from Eastern Canada; our goods must, therefore, come from foreign points from which it is available. To prevent this (if unwilling to open the water route) the Government must increase the duty to keep out the foreign goods. This imposes a heavier burden upon the people for the benefit of the railways. How long will the public submit to this? For, after all, from an economic standpoint this water service from New York is just as essential to the consumer and manufacturer as fuel oil to the railways free of duty, as compared to using British Columbia coal.

The second reason or excuse offered comes as a Government argument, viz.: "We have spent immense sums of money in building railways across Canada, and something is due to the Government and these railway facilities."

By the present financial situation of these railways, as reported in the *News-Advertiser*, September 12th, upon which the Government expended these large sums of money, and the prospects of traffic, it is a question if their extension to the Pacific Coast was justified. To build a railway is one thing, but to create traffic for it is another. The percentage of Pacific Coast traffic they might secure will not support them, and what portion of this they do handle only takes away from the lines already carrying it, which accomplishes nothing so far as the public is concerned; and if artificial means are employed to prevent our using water transportation, which is cheaper, the public must naturally object to the Government's railway policy. The fact is, British Columbia and Eastern Canada must of necessity have the Panama Canal route opened, and if the railways cannot compete they

must surrender the traffic, otherwise we shall not only have the heavy railway burden to bear, but an additional penalty in higher rates, and eventually lose what little business we have.

What is known as Pacific Coast terminal business is carried at low rates by the railways in any case, and on account of the keen competition between the many railways seeking it, is expensive to secure and handle. If, therefore, these new railways so expensively constructed are to be made to pay, they must look for something outside this Coast terminal traffic. The development of the local territory through which they pass must be given more attention. If this be done, the country settled and our products increased, they will create traffic, and may hope to pay. The domestic business of Canada is not sufficient to support the railway lines we now have. We must, therefore, develop a large export trade; to do this we must have steamship connection both on the Atlantic and Pacific to enable us to transport our products to all parts of the world as cheaply as other countries, and we must also be able to transport our inter-provincial traffic as cheaply as our competitors.

The Government and railways referred to are faced with a large problem, and must cope with it in a large way. The closing of the Panama Canal to Canadian goods will not help much. All channels for the distribution of Canadian goods should be opened and the country given a chance to grow.

The Pacific Coast terminal business does not belong to the railways any more than to the steamship lines. It is entitled to reach here by water, if desired, and if the Government denies this right on Canadian goods we must purchase in foreign markets.

Conference in British Columbia.

The proposal to secure the appointment of a customs officer in New York to facilitate shipments of goods from Eastern Canada via the Panama Canal to British Columbia was the subject discussed at a meeting held in Vancouver on October 15th. Representatives of the Canadian Manufacturers Association, Vancouver Board of Trade, and the British Columbia Manufacturers Association were present. Mr. J. A. Bunningham, President of the British Columbia Manufacturers Association, stated that the Government interest in two transcontinental railway lines created a desire on the part of the Government to secure all possible freight traffic for these railways. This attitude reduced the value that the Panama Canal would have to Canadian shippers, especially those situated on the British Columbia Coast. He pointed out that the high freight rates from Eastern Canada forced British Columbia consumers to buy from United States coast cities. He also mentioned that at present Vancouver manufacturers have entrance eastward only as far as Calgary in competition with the manufacturers of the East and claimed that the cheaper rates which would be offered by the Panama Canal would place them in a more competitive situation.

Mr. W. H. Malkin and Mr. George Cottrell, in speaking for the business men of British Columbia, stated that the inevitable reduction in freight rates which would follow water competition would result in increased business for the railways because more goods would be shipped from the Pacific Coast to the interior of Canada.

Mr. S. R. Parsons, Vice-President of the Canadian Manufacturers Association, stated that transportation was the greatest problem which Canada was now facing. He wished to remove any suspicion that Eastern Canada and Western Canada were divided on fundamental issues. Both the East and West should co-operate not only on transportation problems, but on all other great national questions. He understood that but for a declaration of three there would have

been a steamship line operating between Eastern and Western Canada via the Panama Canal. The position of the railways, he said, should not be passed over without due consideration. A great deal of public and private capital was invested in these enterprises and the probability that profitable traffic might be diverted from the transcontinental railways to the Panama Canal might be viewed with considerable alarm. The Canadian Manufacturers Association, he claimed, wanted to treat the matter from a national point of view and to recommend the course which would best serve the interests of the Canadian people.

Mr. A. G. McCandless spoke very earnestly in regard to the serious situation of the lumber industry in British Columbia which was almost at a standstill on account of the lack of ships. The East, he said, was securing war orders, the Prairie Provinces had good crops, but British Columbia was still in straitened circumstances because she could not market her lumber and other natural resources.

Mr. J. E. Walsh, Transportation Manager of the Canadian Manufacturers' Association, explained the technical side of the problem and pointed out that as three interests were represented it would be necessary to compromise in order to reach a satisfactory arrangement.

Mr. W. B. Lanigan, of the Canadian Pacific Railway, and Mr. A. E. Roseveer, of the Grand Trunk Pacific, could not promise any reduction in rates but admitted that they would have to meet whatever competition appeared. They did not know how the appointing of a customs officer in New York would affect the situation but were willing to confer with any who were interested.

Mr. Parsons and Mr. Walsh have visited Victoria and New Westminster and have interviewed the business men in these cities in regard to the problem. The result of their conferences with the various bodies interested in British Columbia and with the special committees appointed will be announced at a later date.

Hon. Robert Rogers' Statement.

Honorable Robert Rogers, Chairman of the Committee of the Cabinet dealing with special transportation and marketing problems, who has returned from New York, where he investigated shipping conditions at the American ports, has given out the following statement with particular reference to provisions already made by the British Admiralty for the transportation of Canadian products:—

"Since Sir Robert Borden's return from London the fleet service plying to Canadian ports: *Dunedin, Trankmere, Glenspean, Policastris, Horatius* and *Marquis Bacquehem*. Glenspean, Policastris, Horatius and Marquis Bacquehem. This brings the number of ships in this service up to a total of twenty. These ships are for the transportation of supplies purchased by the Imperial authorities, and it is estimated that for the balance of the season over two-thirds of their cargo space will be filled with Canadian agricultural products, such as hay, grain and flour. As a result of representations by the Canadian Government, an expert from the War Office is at present in Canada to arrange for increased purchases of grain and flour and for the transportation of the supplies thus purchased.

"In addition to the above ships a fleet for the transportation of horses, hay, etc., has been provided, seven of such remount transports having sailed from Montreal within the past two weeks. These ships carry products of Canadian farms.

"With regard to provisions for the general commercial trade the Imperial authorities have, subject to military necessity, been prepared to do everything possible. In the first place they have, during the past two months, refrained from requisitioning any ships on the Canadian route, taking all

the new ships required from other routes, so that the increases made in the Imperial Transport service to Canada are not additions to the transportation facilities for Canadian products. Further the Imperial Government, when possible, is releasing, temporarily at least, Canadian liners already requisitioned. The Mount Temple of the C. P. R. line will in this way re-enter the commercial trade during the present week. Advices have also been received that the *Kawack*, *Heligoland* and *Barenfels*, ships not previously in the Canadian service, are being released to enter this service immediately. Military necessity must govern every movement made and it

will be obvious that plans cannot be made public, but the Imperial authorities will assist as far as possible and the matter is receiving the continuous attention of the Committee of the Canadian Government."

With regard to the shipping conditions at New York Mr. Rogers said that while rates were extraordinarily high some ships were in the market, one list issued on Saturday last, for example, containing the names of ten tramp steamers asking for bids from North Atlantic ports to Europe, and he was given to understand ships could be chartered as readily by Canadian exporters as by American.

I N S U R A N C E

September Fire Losses.

ACCORDING to the estimate made by the *Monetary Times* the fire loss throughout Canada during the month of September amounted to \$1,116,109, compared with the August loss of \$403,693, and \$1,356,281 for September of last year. During September fire was responsible for the loss of no fewer than twenty-five lives.

The Rat and the Live Wire.

The origin of many mysterious fires, due to "defective wiring," may be traced to the rat, and the photograph on the front cover of *Safety Engineering* can be regarded as Exhibit A to prove the culprit's guilt. This picture was taken by order of a telephone company in the North-West, after complaints of interrupted service had caused a search to be made for the trouble. The body of a partially charred rodent, which had gnawed the wires and formed a short circuit was discovered, and from the peculiar arch of the tail, it was evident



Rat Killed by Live Wire

that he had been electrocuted. Fortunately the telephone wires did not carry a voltage sufficient to cause much trouble; if the electric light wires had been selected by the rat there would have been another unaccountable conflagration, due to "defective wiring." The solution would seem to be a rat-proof insulation, which an expert should be able to suggest readily, and put into the market at slight expense. A coating which would be poisonous to rats or repellent to them, would answer as well as an insulation too hard to be gnawed. Incidentally the dangerous rat should be fought as part of the "Safety First" campaign, not only on this ground, but because it is a spreader of disease, a destroyer of merchandise

and a cause of fires when it finds live wires and rubbish in juxtaposition.

Life Insurance Law.

The convention of the Life Underwriters of Canada was held in Toronto, during the second week of the Exhibition and attracted a large number of leading life insurance men from all parts of the Dominion. The convention occupied three days, during which many interesting problems were discussed—problems of great interest to the insuring public as well as to representatives of insurance companies.

Mr. Charles Ruby, of the Mutual Life of Canada, read a most interesting paper on the law relating to life insurance and enumerated certain legal provisions and restrictions which closely affect every policyholder but with which the average insured person is entirely unacquainted. The following are some extracts:

"No person has an insurable interest in the life of another unless he would in reasonable probability suffer a pecuniary loss or fail to make a pecuniary gain by the other's death, or, in some jurisdictions, unless in the discharge of some understanding he has spent money or is about to spend money for the other's support or advantage.

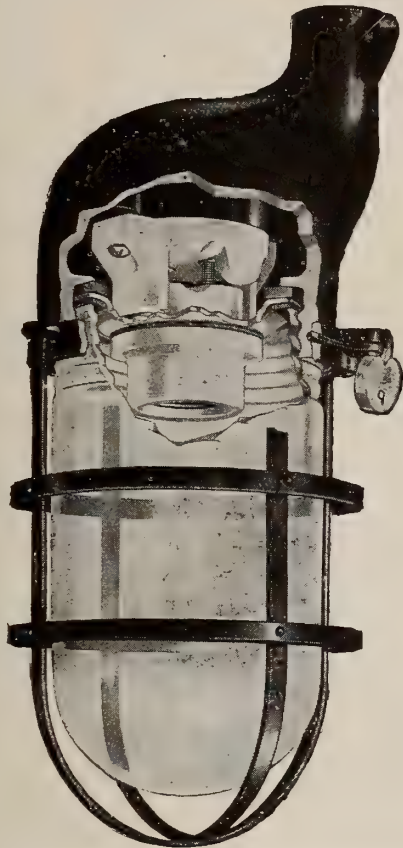
"A child who is of age and therefore not entitled to maintenance, cannot, in the absence of pecuniary interest, insure his parent's life, but insurance effected by parents upon the lives of minor children is not invalid by reason only of the parent's want of pecuniary interest therein.

"Where, however, an application for insurance was bona fide for the benefit of the assured, and the company granted a policy, nothing that afterwards occurred could make it a wagering policy, but there must be no question about the bona fides of the original transaction. In Quebec a policy was treated as a wagering policy in the hands of an assignee, where it had been transferred immediately on and practically contemporaneously with its issue."

Applicants are not always certain about their facts in making the required answers to questions in the application and medical forms and those who have misgivings that the contract might be invalidated on that score may be reassured by being informed that the Act provides that:

"No contract shall be void by reason of the inaccuracy of any such statement, unless it is material to the contract," and that the question of materiality "shall be a question of fact for the jury or for the court if there is no jury."

Any action or proceeding against the company for the recovery of any claim under the contract of insurance may be commenced at any time within one year next after the cause of action arose and not afterwards. Where there is presumption of death, however, the assured not having been



Broken-away View, showing Interior

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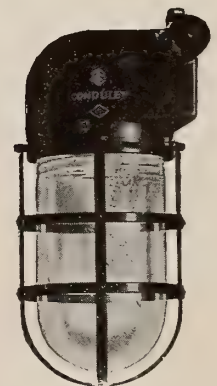
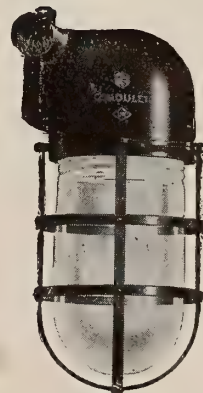
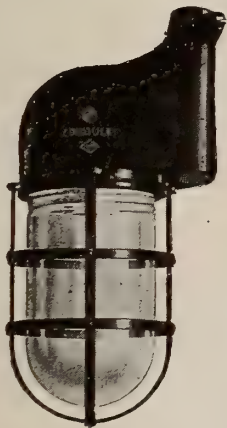
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heard of for seven years, the time limit is one year and six months from the expiration of such period of seven years, but not afterwards, and the same time limit of eighteen months is allowed in a case where the death of the assured is unknown to the person entitled to claim under the contract, the time limit dating from the time the death became known to the claimant.

The Act recognizes three classes of beneficiaries: Preferred, ordinary and beneficiaries for value. The preferred class includes the husband, wife, children, grandchildren and mother of the assured, and the interest of such preferred

beneficiaries is protected. Once an appointment of a preferred beneficiary has been made the policy passes beyond the unrestricted control of the assured and at the same time puts the insurance money beyond the reach of his creditors. The assured, however, has the right to apportion the insurance money and vary the beneficiaries practically as he may see fit, provided he does not go outside the class of preferred beneficiaries. Any other dealing with the policy, including its surrender (except to surrender it for a paid-up policy or to borrow on it for the purpose of paying premiums) requires the consent of the preferred beneficiary.

T A R I F F

By J. R. K. BRISTOL

Laws Against "Dumping."

THE United States Government has invited suggestions for statutory changes to prevent unfair competition from abroad. Their tariff law now contains the following provision, which, to some extent, relates to the question of dumping:—

E. That whenever any country, dependency, colony, province, or other political subdivision of government shall pay or bestow, directly or indirectly, any bounty or grant upon the exportation of any article or merchandise from such country, dependency, colony, province, or other political subdivision of government and such article or merchandise is dutiable under the provisions of this Act, then upon the importation of any such article or merchandise into the United States, whether the same shall be imported directly from the country of production or otherwise, and whether such article or merchandise is imported in the same condition as when exported from the country of production or has been changed in condition by manufacture or otherwise, there shall be levied and paid, in all such cases, in addition to the duties otherwise imposed by this Act, an additional duty equal to the net amount of such bounty or grant, however the same be paid or bestowed. The net amount of all such bounties or grants shall be from time to time ascertained, determined, and declared by the Secretary of the Treasury, who shall make all needful regulations for the identification of such articles and merchandise and for the assessment and collection of such additional duties."

"When the Underwood Tariff was before Congress a dumping clause was inserted which followed the same lines as the dumping clause in the Customs Tariff of Canada, 1907; but that proposed legislation was dropped by the United States Senate. The whole question, however, is again thrown open to consideration, because of the published views of prominent United States business men that severe price-cutting will occur from European countries after the close of the war. In this connection Secretary Redfield has addressed a letter to the Bureau of Foreign and Domestic Commerce. The letter is published in the Trade and Commerce Weekly Bulletin, No. 611, because, owing to the similarity of conditions in the two countries, it is sure to interest commercial men in Canada. It is as follows:—

"If the question arises as to the attitude of the Department of Commerce toward what is called "dumping" after the war shall end, you may say that I shall recommend in my annual report that unfair competition from abroad shall not be permitted to injure a legitimate American industry any more than it is permitted to do so in our domestic field. Especially I

shall oppose action on the part of any foreign monopoly toward controlling the American market by unfair competition in an attempt to injure or destroy an American industry. There is no doubt in my mind that this should be done. The more serious question to which consideration is being given is as to the method of doing it. Various plans have been proposed, some of which seem to permit reactions which are possibly undesirable. I am considering the methods used in different countries, with a frank preference for such as have nothing to do with tariffs or duties. I should be very glad to receive suggestions from practical commercial men as to the most efficient means of detecting and preventing this unfair competition.

"You may be quite sure of my earnest purpose to provide, so far as it lies in my power to do so, that American industries shall not suffer from a type of unfair competition at the hands of foreign producers which would be forbidden if it took place at the hands of American producers.

"There is no reason why you should not make known this expression of my views."

Yours very truly,

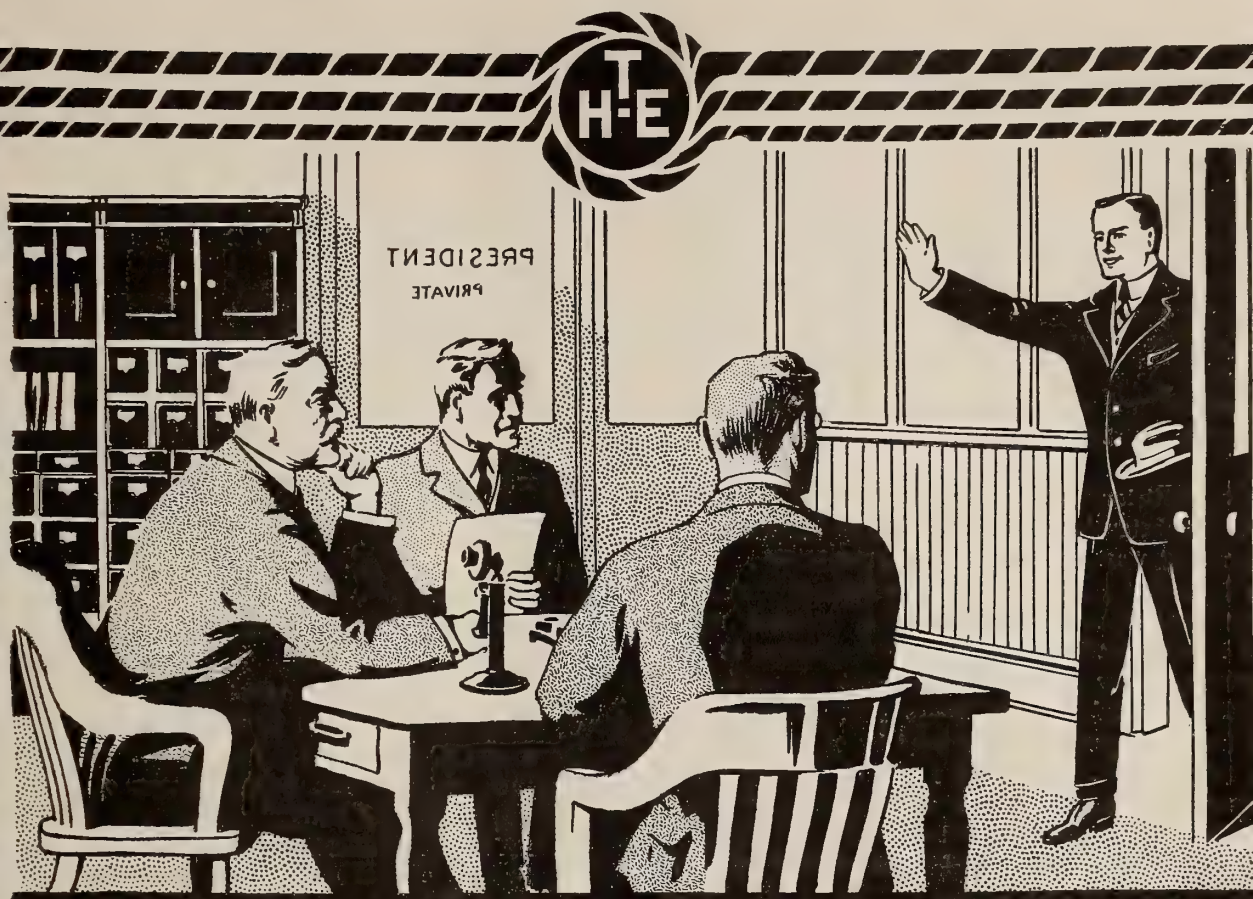
WILLIAM C. REDFIELD.

Dr. E. E. Pratt, Bureau of Foreign and Domestic Commerce,
409 Customs House, New York, N.Y.

In Weekly Bulletin No. 612, issued by the Department of Trade and Commerce, this question is further discussed and a comparison made of the dumping clauses of the Union of South Africa and Australia, as follows:—

"In 1914, the Government of the Union of South Africa included an anti-dumping clause in its new tariff act. This clause, likewise, was modelled almost exactly after the Canadian clause. The South Africa act provides that in the case of goods imported of a class or kind made or produced in the union, if the export or actual selling price is less than the true current value of the same goods when sold for home consumption in the usual and ordinary course in the country from which they are exported, there may be collected, in addition to the duties otherwise prescribed, a dumping duty equal to the difference, which dumping duty shall not in any case exceed 15 per cent. ad valorem.

The Australian Government as far back as 1906 enacted legislation against dumping. The Australian provisions are included in what is known as the Australian Industries Preservation Act, which is the Australian law against monopoly and unfair competition in general. Under that act unfair competition has in all cases reference to competition with those Australian industries the preservation of which, in the



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opinion of the comptroller general or a justice, as the case may be, is advantageous to the Commonwealth, having due regard to the interests of producers, workers and consumers. Competition is deemed to be unfair, unless the contrary is proved, if—

“(a) Under ordinary circumstances of trade it would probably lead to the Australian goods being no longer produced or being withdrawn from the market or being sold at a loss unless produced at an inadequate remuneration for labor; or

“(b) The means adopted by the person importing or selling the imported goods are, in the opinion of the Comptroller-General or a Justice, as the case may be, unfair in the circumstances; or

“(c) The competition would probably, or does in fact, result in an inadequate remuneration for labor in the Australian industry; or

“(d) The competition would probably, or does in fact, result in creating any substantial disorganization in Australian industry or throwing workers out of employment; or

“(e) The imported goods have been purchased abroad by or for the importer from the manufacturer, or some person acting for or in combination with him, or accounting to him, at prices greatly below their ordinary cost of production where produced or market price where purchased; or

“(f) The imported goods are imported by or for the manufacturer, or some person acting for or in combination with him or accounting to him, and are being sold in Australia at a price which is less than gives the person importing or selling them a fair profit upon fair foreign market value, or their fair selling value if sold in the country of production, together with all charges after shipment from the place whence the goods are imported directly to Australia (including customs duty).

“In determining whether the competition is unfair the Australian Government takes into consideration the management, process, the plant, and the machinery employed or adopted in the Australian industry affected by the competition, and these are required to be reasonably efficient, effective, and up to date. The Comptroller-General, when-

ever he has received a complaint in writing and has reason to believe that any person, either singly or in combination with any other person, within or beyond the Commonwealth, is importing into Australia goods with the intent to destroy or injure any Australian industry by their sale or disposal within the Commonwealth in unfair competition with any Australian goods, may certify to the Government accordingly. In making such certification the Comptroller-General is required to set forth in detail the grounds of unfairness in the competition.

“The Comptroller-General, moreover, is required, before making his certificate, to give the importer an opportunity to show cause why his certificate should not be made, and to furnish him with a copy of the complaint. Upon receipt of the certificate the Government may refer to a justice the investigation and determination of the question whether the imported goods are being imported with the intent alleged, and, if so, whether the importation of the goods should be prohibited, either absolutely or subject to any specified conditions or restrictions or limitations. While such a question is the subject of investigation, the goods involved are not allowed to be imported, unless the importer gives a sufficient bond or other security. The courts, in such cases, are required to base their decisions on the substantial merits, without regard to legal forms or technicalities, or whether the evidence before them is in accordance with the law of evidence or not. The determination of the courts is final and conclusive and without appeal, and cannot be questioned in any way. Notifications of the findings of the courts are required to be published in the official *Gazette*, and if the courts shall have found that the imported goods are being imported with the intent alleged, and that their importation should be prohibited or restricted, the published notice has the same effect as a proclamation under the Customs Act prohibiting or restricting the importation of the merchandise.”

It will be apparent that the Australian method of dealing with unfair competition appears slow and cumbersome, whilst the procedure in Canada and the Union of South Africa is direct and immediate in results.

New Zealand Tariff Changes.

New and Old Schedules Compared.

The following changes in the customs duties have been outlined by resolutions passed by the House. Some variations may be made before the Bill is passed:—

New Tariff Heading.	Old Rate of Duty.		New Rate of Duty.	
	Preferential Tariff rate.	General Tariff.	Preferential Tariff rate.	General Tariff.
Bicycles, tricycles, and the like vehicles, including motor-cycles, also finished or partly finished or machined parts of the same, n.o.e. side cars for motor-cycles.....	20% ad. val.	30% ad. val.	10% ad. val.	20% ad. val.
Bicycles, tricycles and motor-cycles, fittings for, namely, the following articles when not plated, japanned, enamelled or varnished—namely, drop forgings, stampings, steel balls, weldless steel tubes with or without butted ends, wood or metal rims (not bored), spokes, forks, stays, handle-bars, and seat-pillars, unbuilt, bracket-shells, fork and stay-ends, fork-tips, bridges, crowns and lugs.....	free	20% ad. val.	free	10% ad. val.
Bicycles, tricycles and motor-cycles, free fittings for, namely, rubber tires, pneumatic rubber tires, outside covers of rubber, and inner tubes.....	free	.....	free	.....
Gas engines, hot-air engines, and oil engines, all kinds, and including engines specially suited for motor-cars or motor-vehicles, motor-cycles or flying machines.....	free	20% ad. val.	10% ad. val.	20% ad. val.
Machinery, electric and appliances, electric generators and electric motors, including slide-rails therefor, electric lamps, electric transformers.....	10% ad. val.	15% ad. val.	10% ad. val.	20% ad. val.
Motor vehicles for road traffic, n.o.e., including motor-cars and motor carriages.....	20% ad. val.	.....	10% ad. val.	20% ad. val.
Materials for the manufacture of carriages, carts, drays and waggons, and motor vehicles, viz., rubber tires, pneumatic rubber tires, outer covers of rubber, and inner tubes.....	free	.....	free	.....

Foreign Trade.

The total Canadian foreign trade for the month of September, 1915, exclusive of coin and bullion, amounted in value to \$91,742,602, compared with \$77,111,666 for the same month a year ago. Upwards of fifteen million dollars of the increase is accounted for by an increase in exports of domestic products. The details of Canada's foreign trade for the months of September, 1915 and 1914, respectively, and also for the six months ending September, 1915 and 1914, respectively, follow:—

	The month of September,				Six months ending September,			
	1914.		1915.		1914.		1915.	
	Domestic.	Foreign.	Domestic.	Foreign.	Domestic.	Foreign.	Domestic.	Foreign.
	\$	\$	\$	\$	\$	\$	\$	\$
The Mine	5,120,246	37,635	5,600,416	365,113	26,409,370	124,831	30,096,530	6,803,003
The Fisheries	1,987,669	5,983	2,750,313	8,494	7,757,743	64,969	9,433,073	27,184
The Forest	4,945,471	106,030	6,527,625	296,757	23,981,614	200,052	28,572,001	301,214
Animals and their produce	7,063,312	148,461	10,188,424	205,145	33,127,196	581,503	44,933,830	1,639,182
Agriculture	7,478,798	6,641,188	11,139,935	5,863,403	57,519,267	28,563,588	39,346,983	14,449,283
Manufactures	5,188,314	868,589	9,244,974	676,006	31,917,279	3,736,155	71,476,819	3,065,523
Miscellaneous	12,803	939,595	678,048	171,229	161,430	2,692,354	2,532,912	699,545
Total merchandise ...	31,796,613	8,747,481	46,129,735	7,586,147	180,873,899	35,963,452	246,392,148	26,984,934
Coin and bullion not included in above.								
Dutiable goods	22,575,997	.....	22,279,886	.....	158,584,382	.....	124,355,564	.....
Free goods	13,991,575	.....	15,746,834	.....	93,103,705	.....	89,233,355	.....
Total imports	36,567,572	.....	38,026,720	.....	251,688,087	.....	213,588,919	.....
Duty collected	6,016,606	.....	7,904,995	.....	42,857,086	.....	44,418,033	.....

Board of Customs Decisions.

Declared that *semi-autoplate machines* are entitled to entry under Tariff Item 441, in effect from the 13th May, 1913. Item 441 provides for free entry except as to the war tax.

Material per sample, described as "*Marl*" claimed by exporter to be calcareous tufa, from the International Agricultural Corporation, In. (Caledonia Marl Branch), Buffalo, is held to be lime carbonate and declared dutiable under tariff item 663. Under item 663 the duty payable is 10% ad valorem.

Tariff status of bags, ordinarily used as coverings for goods subject to a specific rate of duty or free—

Declared that *jute* bags may be rated for duty as usual coverings, under tariff item 710 (a), when imported in the form of coverings for corn, cornmeal, barley, oats, flaxseed, peas, beans, peanuts, potatoes, wool, coal and sugar, if such coverings appear appropriate for use in such importations and not to be regarded as *designed* for other use when imported containing such articles.

Customs Rulings.

Rough Lenses.—Glass plates or discs for lenses may be regarded as only rough cut or unwrought, and subject to entry under tariff item 759, when the surface has not been "ground" or polished on either side and the edges only rough ground (or rough cut). In effect from 1st October, 1915. Entries, therefore, claimed to be free under item 759 should contain a description as above outlined written on the face thereof by the importer. File No. 68997.

By the provisions of tariff item 759, free entry is allowed except for the war tax of 7½% general tariff, which of course applies on all such importations.

Fabric called "*Buckramette*" per samples for the manufacture of hat and bonnet shapes, ruled under tariff item 638 at the duty of 7½% general tariff.

Vitrolite and opalite tiling (glass), item 326a—general tariff rate 22½%, with 7½% war tax.

Dr. Rohm's Oropon C Bate, ruled under tariff item 203—duty under general tariff 7½%.

Tapes of cotton or linen, not over 1¼ inch in width, not including measuring tape lines, dutiable under the general tariff at 35% ad valorem, with an additional 7½% ad valorem war tax.

Wizard Wax, for waxing floors, ruled under item 711.

Garments made from fabrics composed wholly or in part of wool would be dutiable under the provisions of tariff item 567 at the rate of 35% ad valorem, when imported under the general tariff, with an additional 7½% ad valorem war tax.

Garments made from fabrics composed of cotton or linen, and silk, the silk being the component material of chief value, would be dutiable under tariff item 583 at the rate of 37½% ad valorem when imported under the general tariff.

Garments made from fabrics composed wholly of cotton or linen, or of cotton or linen and silk, the cotton or linen being the component material of chief value, would be dutiable as "cotton clothing" under tariff item 575 at the rate of 35% ad valorem when imported under the general tariff, with an additional 7½% ad valorem war tax.

War Measures Embargo on Imports.

A proclamation of His Majesty the King, dated 14th September, relating to trading with the enemy, extends the embargo on imports of enemy origin as follows:—

"For the purposes of the Proclamations for the time being in force relating to trading with the enemy, the expression "enemy," notwithstanding anything in the said Proclamations is hereby declared to include, and to have included, any incorporated company or body of persons (wherever incorporated) carrying on business in any enemy country or in any territory for the time being in hostile occupation."

It will be observed from the foregoing that any incorporated company or body of persons (in whatever country incorporated) if carrying on business in any enemy country or in any territory for the time being in hostile occupation cannot ship goods into Canada.

Tariff Changes of the United Kingdom.

Full particulars on the tariff changes announced in the recent British Budget (21st September, 1915) are obtainable from the head office of the Canadian Manufacturers Association.

(Continued on page 767.)

Would You Expect the Judgment of Such Firms as These to be Sound?

One or two of them MIGHT be mistaken—but is it likely they ALL were when they selected the International Time Recording Company system in preference to all others?

Canadian Westinghouse Co.
Canadian Wire & Iron Goods
Cluett, Peabody Co.
Dominion Steel Castings
Grafton & Co.
Hamilton Bridge Works Co.
Hamilton Steel & Iron Co.
Otis Fenson Elevator
Steel Company of Canada
Ottawa Car Company
Royal Mint
Dominion Arsenal
Mechanics' Supply
Paquet Limited
Ross Rifle Co.
Alberta Government Railways
American Radiator Co.
Henry Morgan & Co.
Tooke Bros.
Chateau Laurier
Dept. Marine and Fisheries
Dept. Public Works
Intercolonial Railway
Lippert Furniture Co.
Maple Leaf Milling
Waterous Engine Works
Reo Motor Car Co.
Sawyer-Massey Co.
American Brass Co.
American Smelting & Refining Co.
Acme Tea Company
Allis-Chalmers Co.
Atchinson, Topeka & Santa Fe R.R.
Bethlehem Steel Co.
Boston & Maine Railroad
Brown & Shapre Manufacturing Company
Buick Motor Car
Burroughes Adding Machine

Carnegie Steel Co.
Chalmers Motor Co.
Chicago Telephone
Crucible Steel Co. of America
John Deere & Co.
Delaware & Hudson Co.
Great Northern Railway
H. J. Heinz Co.
International Harvester Co.
International Paper Co.
H. W. Johns-Manville Co.
National Biscuit Co.
Packard Motor Company
Peerless Motor Co.
Pennsylvania Railway Co.
Pierce Arrow Motor Co.
Sears-Roebuck Co.
Studebaker Corporation
United States Navy
Victor Talking Machine
City of Winnipeg
Hydro-Electric Co.
City of Toronto
Winnipeg General Hospital
City of Calgary
Protestant Board of School Commissioners
American Sugar Refining Co.
American Brake Shoe & Foundry Co.
American Sheet & Tin Plate Co.
American Steel Foundries Co.
Aluminum Co. of America
Armour & Company
Botany Worsted Mills
Brunswick, Balke, Callendar Co.
J. I. Case Threshing Machine
Columbia Mills
Crane Co.

Crown Cork & Steel
Curtis Publishing Co.
Diamond Rubber Co.
Diamond Match Co.
Dodge Bros.
Eastern Malleable Iron
Eastman Kodak
Thos. A. Edison
Endicott Johnston Co.
Field, Marshall & Co.
H. H. Franklin Manufacturing
General Electric
General Fire Extinguisher
Gould Manufacturing Co.
International Steel Pump Co.
Larkin Company
Lehigh Valley Railroad
W. H. McElwain Co.
Mengel Box Company
National Silk Dyeing Co.
Robinson & Crawford
Southern Railway Company
Union Metallic Cartridge Co.
Winchester Repeating Arms
Otto Higel Company
Ryrie Bros.
Nordheimer Company
Canadian Copper Company
National Steel Car
Dominion Steel Foundries
Robert Simpson Co.
Mickle, Dymont Company
Laidlaw Lumber Co.
Gunns Limited
Verity Plow Co.
Pratt & Letchworth
United States Envelope
Pacific Mills
Quaker Oats

The International Time-card System shows every employee in figures of his own making IN RED exactly how much time he has lost during the week. This record saves all disputes and, incidentally, greatly facilitates the pay-roll make-up as the cards can be distributed amongst several clerks. A big loss of time known as "walking time" between door and bench can also be entirely eliminated. These are

only a few of the many excellent and exclusive features of the International Time-card System.

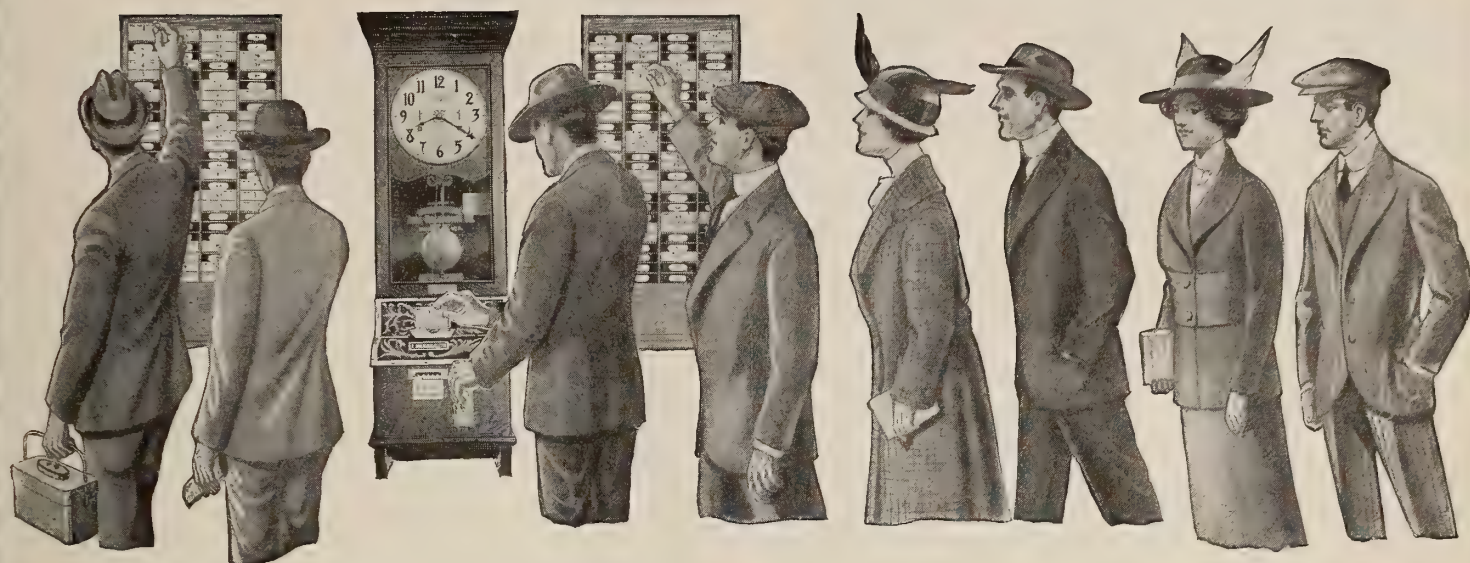
We are the largest manufacturers of Time Recording Systems in the world. Our advice is free to manufacturers who wish to improve their cost-keeping systems. Correspondence is invited.

International Time Recording Company of Canada, Limited

Ryrie Bldg., Corner Shuter and Yonge Sts., TORONTO

F. E. MUTTON,
General Manager

Montreal Representative: CHARLES COLE
344 St. Catharine St. W. Telephone Uptown 6333



Who Do These People Work For?

Any one of the following firms—all are users of the International Time Recording Co. Systems :

Acton Publishing Company
Aikenhead Hardware Co.
Autosales Gum & Chocolate Co.
A. A. Allan Limited
W. H. Banfield & Son
Beal Bros.
Beardmore & Co.
Blackhall & Co.
Boake Manufacturing Co.
S. F. Bowser Company
British American Oil Co.
Brigdens Limited
Brown Bros.
F. N. Burt Co.
Canadian Carpet Co.
Canadian Fairbanks-Morse Co.
Canadian General Electric Co.
Canadian Kodak Company
Dominion Radiator
R. G. Dun
Dunlop Tire & Rubber Co.
T. Eaton Co.
Eby Blain

H. P. Eckardt Co.
Firstbrook Box Co.
Flett, Lowndes Co.
E. W. Gillett Co.
Abitibi Power & Paper Co.
Goodyear Tire & Rubber Co.
Gourlay, Winter & Leeming
Geo. Hees & Son
Heintzman & Co.
Canadian Rumley Company
City Dairy
Confederation Life Association
Consumers' Gas Co.
Copeland, Chatterson Co.
Canadian Pacific Railway Co.
Canadian Rolling Mills Limited
Canadian Steel Foundries
Canada Carbide Co.
Canada Cement
Canada Sugar Refining Co.
Dominion Guarantee
Dominion Iron & Steel Co.
Ford Motor Company
Hudson Bay Knitting Co.

Ideal Bedding Co.
W. R. Johnston Co.
Julian Sale Leather Co.
Ambrose Kent & Sons
Massey-Harris Co.
Mathews, Blackwell Co.
Methodist Book Room
MacDonald Manufacturing Co.
McLaughlin Carriage Co.
McLean Publishing Co.
Nasmith Co.
Ontario Wind Engine Co.
Russell Motor Car Co.
Salada Tea
Saturday Night
Toronto Carpet Co.
Toronto Electric Light
Toronto Street Railway
Toronto Type Foundry
Turnbull Elevator Co.
A. R. Williams Machinery
Alaska Feather & Down Co.
Ames, Holden, McCready Co.
Canadian Car & Foundry

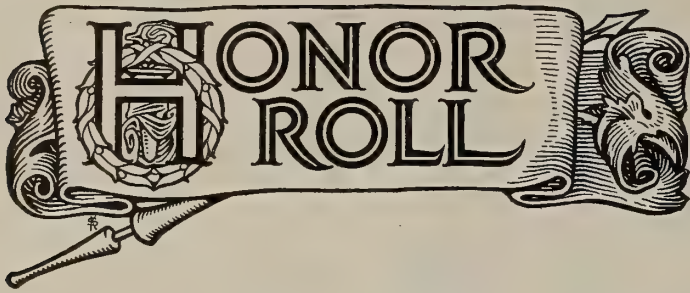
There is only one reason why these firms use the International Time Recording Systems; it costs many times more to be without it than it costs to buy it.

International Time Recording Company of Canada, Limited

Ryrie Bldg., Corner Shuter and Yonge Sts., TORONTO

F. E. MUTTON,
General Manager

Montreal Representative : CHARLES COLE
344 St. Catharine St. W. Telephone Uptown 6333



THE following members and managers of Canadian manufacturing concerns now on active military service:

NOTE.—Owing to limitations of space, only members and managers of manufacturing concerns can be included in this list. INDUSTRIAL CANADA will be glad to receive additional names.

Col. Chas. Smart, Smart-Woods, Limited, Montreal.
 Col. John Gunn, Gunns, Limited, Montreal.
 Lieut.-Col. J. Bruce Payne, J. Bruce Payne, Ltd., Granby, P.Q.
 Lieut.-Col. Wm. Hendrie, Hamilton Bridge Works Co., Ltd., Hamilton, Ont.
 Lieut.-Col. J. L. McAvity, T. McAvity & Sons, Ltd., St. John, N. B.
 Lieut.-Col. R. W. Patterson, Winnipeg Paint & Glass Co., Ltd., Winnipeg.
 Lt.-Col. Frank Howard, Brantford Emery Wheel Co., Brantford, Ont.
 Lieut.-Col. A. B. Petrie, Petrie Mfg. Co., Winnipeg.
 Lieut.-Col. G. F. C. Poussette, Assistant Secretary C. M. A., Winnipeg.
 Lieut.-Col. J. J. Carrick, Pigeon River Lumber Co., Port Arthur
 Lieut.-Col. J. A. Currie, M.P., Imperial Steel and Wire Co., Ltd., Collingwood.
 Lieut.-Col. F. C. McCordick, Frank C. McCordick, St. Catharines.
 Lt.-Col. E. W. Rathbun, The Rathbun Co., Deseronto, Ont.
 Lieut.-Col. A. J. Oliver, R. McDougall Co., Limited, Galt, Ont.
 Lieut.-Col. J. F. L. Embury, Canadian Lock Joint Pipe Co., Regina, Sask.
 Lieut.-Col. F. B. Black, J. L. Black & Sons, Ltd., Sackville, N.B.
 Lieut.-Col. Ibbotson Leonard, E. Leonard & Sons, London, Ont.
 Major F. J. Dingwall, D. R. Dingwall, Ltd., Winnipeg.
 Major W. R. Marshall, Standard Fuel Co., Ltd., Toronto.
 Major John McPhee, Barrie Tanning Co., Barrie.
 Major Wm. Scully, Wm. Scully, Montreal.
 Major Kimmins, E. D. Smith & Son, Ltd., Winona, Ont. (Killed in battle.)
 Major T. M. McAvity, T. McAvity & Sons, Ltd., St. John, N. B.
 Major Pelly, Steel and Radiation, Ltd., Toronto.
 Major Russell Britton, Manager Cowan & Britton, Ltd., Gananoque, Ont.
 Major W. R. Turnbull, Robert Duncan & Company, Hamilton, Ont.
 Major J. K. Bertram, The John Bertram & Sons, Ltd., Dundas.
 Major J. R. L. Parsons, Canadian Lock Joint Pipe Co., Regina, Sask.
 Major T. C. Irving, Moffat-Irving Co., Toronto.
 Major P. R. Hanson, Dunlop Tire & Rubber Goods Co., Ltd., Montreal.
 Major C. J. Whittier, Somerville & Co., Ltd., Brandon.

Major Woodman Leonard, E. Leonard & Sons, London, Ont.
 Capt. E. E. Williams, Dunlop Tire & Rubber Goods Co., Ltd., London.

Captain Trumbull Warren, Gutta Percha & Rubber Co., Ltd., Toronto. (Killed in battle.)

Captain Clifford T. Trotter, Standard Clay Products, Limited, St. Johns, P.Q.

Captain Harold L. Trotter, H. Holgate, Engineers, Montreal.

Captain Harvey B. Evel, Evel Casket Co., Ltd., Hamilton.

Captain H. J. Heasley, Sadler & Haworth, Montreal.

Captain W. D. Greer, Consumers Gas Co., Toronto.

Captain J. T. Duguid, Imperial Steel and Wire Co., Ltd., Collingwood.

Captain F. F. M. Brown, College Press, Ltd., Toronto.

Captain C. R. Crowe, Crowe's Iron Works, Guelph, Ont.

Captain Smith, E. D. Smith & Son, Ltd., Winona, Ont.

Captain F. R. Newman, Canadian Fairbanks-Morse Co., Ltd., Toronto.

Captain J. M. Eakins, Canada Grip Nut Co., Ltd., Montreal, Que.

Captain F. P. Duck, D. Acland & Son, Winnipeg.

Captain G. H. Weld, Farmers Advocate, Ltd., Winnipeg.

Captain W. L. Roblin, Winnipeg Telegram, Winnipeg.

Captain R. Steacie, Smart-Woods, Ltd., Montreal. (Killed in battle.)

Captain George D. McLauchlan, McLauchlan & Sons Co., Ltd., Owen Sound, Ont.

Capt. H. C. Trenaman, Domestic Specialty Co., Limited, Hamilton, Ont.

Captain G. F. Grafton, Grafton & Company, Dundas, Ont.

Capt. R. A. McAvity, T. McAvity & Sons, Ltd., St. John, N.B.

Capt. Victor Nordheimer, The Nordheimer Piano & Music Co., Ltd., Toronto Ont.

Capt. Alexander Campbell, Campbell Steel & Iron Works, Ltd., Ottawa, Ont. (Died of illness).

Capt. Walter A. Harrison, T. H. Estabrook Co., Ltd., St. John, N.B.

Capt. Edgar H. Shuttleworth, J. R. Shuttleworth & Sons, London, Ont.

Captain A. R. Taylor, T. W. Taylor Co., Ltd., Winnipeg.

Lieut. Harvey Cockshutt, Cockshutt Plow Co., Brantford.

Lieut. C. H. Ackerman, B. F. Ackerman, Son & Co., Peterboro.

Lieut. K. E. Drinkwater, A. B. See Electric Elevator Co. of Canada, Ltd., Montreal.

Lieut. T. E. Ryder, Canadian Fairbanks-Morse Co., Ltd., St. John, N.B.

Lieut. J. V. Young, Hamilton Cotton Co., Ltd., Hamilton, Ont.

Lieut. W. L. McIntosh, Canon Lake Lumber Co., Winnipeg.

Lieut. W. S. Drewry, E. L. Drewry, Ltd., Winnipeg.

Lieut. G. H. Saltmarsh, Metallic Roofing Co., Winnipeg.

Lieut. Wm. Martin, Jr., Manitoba Gypsum Co., Winnipeg.

Lieut. B. M. Green, Smart-Woods, Ltd., Montreal.

Lieut. Jack Woods, Smart-Woods, Ltd., Montreal.

Lieut. Lacey, Steel and Radiation, Ltd., Toronto.

Lieut. Garret, Steel and Radiation, Ltd., Toronto.

Lieut. P. D. McAvity, T. McAvity & Sons, Ltd., St. John, N.B.

Lieut. E. C. H. Moore, Coleman Baking Powder Co., Ltd., Brockville, Ont.

Lieut. Ian Hendrie, Hamilton Bridge Works, Limited, Hamilton, Ont.

Lieut. Geo. C. Wright, E. T. Wright Co., Limited, Hamilton, Ont.

(Continued on page 767.)

FOR USE IN THE ISOLATED PLANT

McEWEN ENGINES

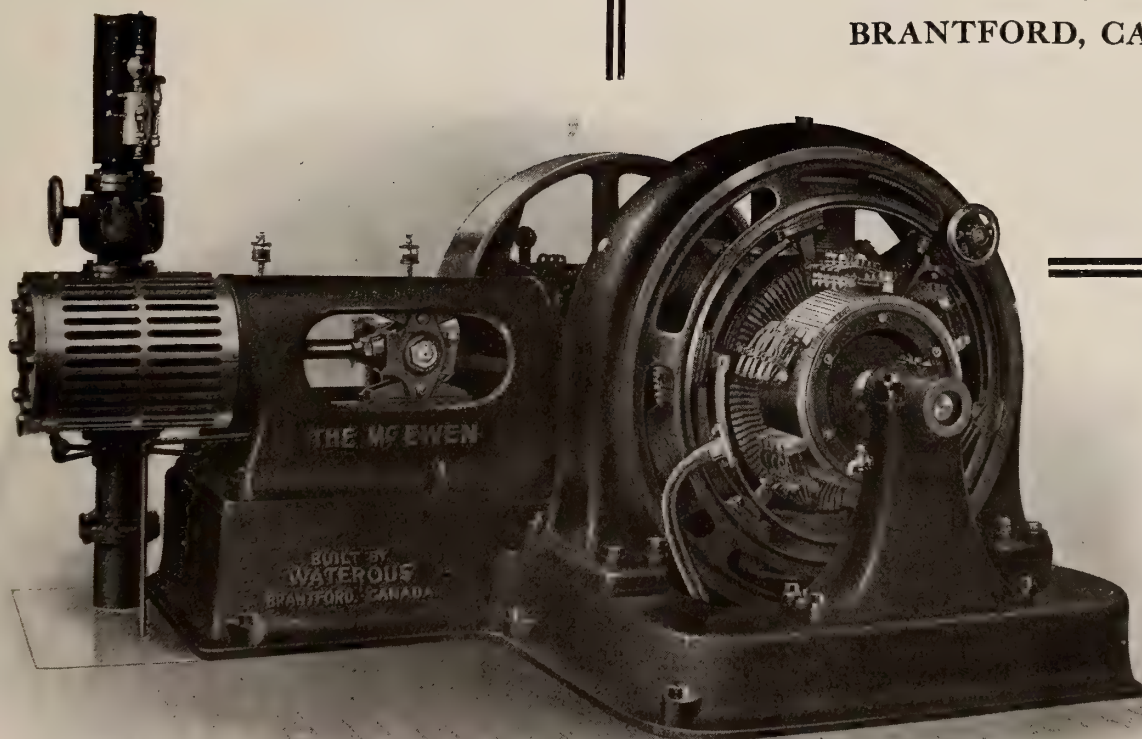
These dependable engines are built for continuous duty. They are your best insurance against costly repair bills and unexpected shut-downs.

They operate quietly and smoothly with an exceedingly close regulation under fluctuating loads. Sturdiness and their large reserve capacity enable them to respond instantly to heavy peak load demands.

Your careful investigation of their actual service performance record in all parts of the country is specially requested. Let us send you our list of McEwen users.

The Waterous Engine Works Co., Limited

BRANTFORD, CANADA



Built in simple and compound units up to 700 H.P. capacity.

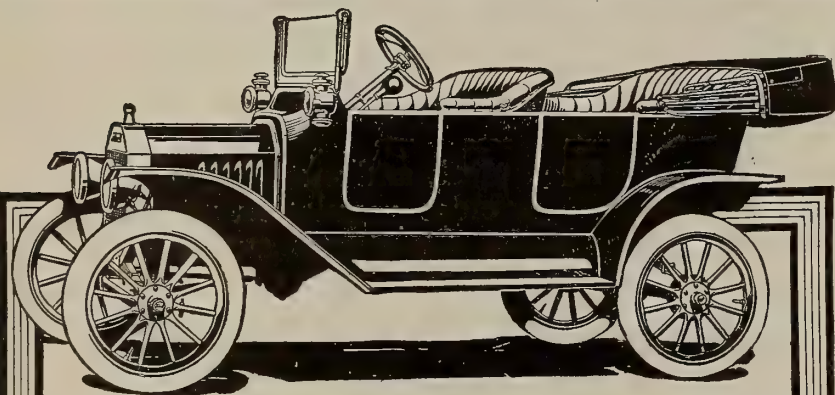
May we send you descriptive literature?

"CRANES MADE IN CANADA"

**ELECTRIC TRAVELING CRANES**

HAND POWER TRAVELING CRANES

ELECTRIC HOISTS AIR HOISTS FOUNDRY EQUIPMENT
 NORTHERN CRANE WORKS, LIMITED - WALKERVILLE, ONTARIO



"MADE IN CANADA"

Ford Touring Car

Price \$530

You'll get farther—with less expense—by "kicking in the clutch" than by "pushing on the lines." The Ford will triple your horse delivery service and increase your profits. Give the economical Ford a chance to cut down your cost of doing business.

The Runabout is now \$480; the Town Car \$780; f. o. b. Ford, Ontario. All cars completely equipped, including electric headlights. Equipment does not include speedometer. Get particulars from Ford Motor Company Limited, Ford, Ontario.

**CANADA'S CROP.**

The total wheat crop of Canada is now placed at 336,258,000 bushels from 12,986,400 acres, representing an average yield per acre of 25.89 bushels. This total is 174,978,000 bushels more than last year's inferior yield of 161,280,000 bushels, the crop this year being therefore more than double, or 108 per cent. more than that of last year. It is 104,541,000 bushels, or 45 per cent., in excess of the previous highest yield of 231,717,000 bushels, in 1913, and 140,232,000 bushels, or 72 per cent., in excess of the annual average yield of 196,026,000 bushels for the five years 1910 to 1914.

Of oats the revised total yield is 481,035,500 bushels, from 11,365,000 acres, an average per acre of 42.33 bushels.

Barley comes out at 50,868,000 bushels, from 1,509,350 acres, an average per acre of 33.70 bushels.

Rye is now 2,478,500 bushels from 112,300 acres, or 22.07 bushels per acre, and flax seed 12,604,700 bushels from 1,009,600 acres, or 12.48 bushels per acre.

In the three north-west Provinces the estimated yield of wheat is 304,200,000 bushels, and of oats 305,680,000 bushels.

The remaining grain crops of Canada, whose yields are now reported on for the first time this year, are as follows: Peas, 3,240,000 bushels; beans, 594,000 bushels; buckwheat, 8,101,000 bushels; mixed grains, 17,128,500 bushels, and corn for husking, 14,594,000 bushels.

The condition of wheat, oats and other grain varies from 90 to 93 per cent. of the standard quality, fixed at 100.

DENNISTEEL
 LONDON - CANADA
THE BEST STEEL LOCKERS MADE IN CANADA
 MADE BY
THE DENNIS WIRE AND IRON WORKS CO. LIMITED
 LONDON, CANADA

TO MANUFACTURERS

The undersigned is prepared to represent one or more first-class Manufacturing Firms, in the City of Hamilton. Extensive acquaintance with Merchants and Manufacturers. Excellent references furnished. (Member Board of Trade and Ex-Secretary, Hamilton Branch, Canadian Manufacturers' Association.)

C. A. MURTON

HAMILTON, ONT

HONOR ROLL.

(Continued from page 764.)

Lieut. W. H. McLaren, McLaren's, Limited, Hamilton, Ont.
 Lieut. H. C. Hatch, Canada Steel Goods Co., Limited, Hamilton, Ont.

Lieut. R. G. Hutchinson, International Harvester Co., of Canada, Ltd., Calgary, Alta.

Lieut. Donald S. Fisher, Enterprise Foundry Co., Sackville, N.B.

Sergeant W. A. Logie, Smart-Woods, Ltd., Winnipeg, Man.

Sergeant Harold Rolph, Rolph and Clark, Ltd., Toronto.

Corporal A. R. Ackerman, B. F. Ackerman, Son & Co., Peterboro.

Corporal Stewart L. Young, Young-Thomas Soap Company, Regina, Sask.

Pte. Murton Rugg, E. W. Rugg Co., Winnipeg.

Arthur H. Coles, Edmonton Law Stationers, Ltd., Edmonton.

Pte. A. C. Bertram, The John Bertram & Sons Co., Ltd., Dundas.

Pte. Norman V. Cliff, Toronto Salt Works, Toronto.

Pte. Alex. G. Rosamond, Rosamond Woolen Co., Almonte.

Pte. Warren Nelson, Semi-Ready, Limited, Montreal.

TARIFF.

(Continued from page 761.)

ciation (address Tariff Department). The following goods, hitherto free, have been made dutiable:—

Articles.	Rates of Duty.
Motor cars, including motor bicycles and motor tricycles	33½% of value.
Accessories and component parts of motor cars, motor bicycles or motor tricycles ...	
Musical instruments, including gramophones, pianolas and other similar instruments..	
Accessories and component parts of musical instruments and records and other means of reproducing music	
Clocks, watches, and component parts of clocks and watches	

Cinematograph films; all films imported for the purpose of the exhibition of pictures or other optical effects by means of a cinematograph or other similar apparatus, viz.:—

	Per linear foot.
Blank film, on which no picture has been im- pressed, known as raw film or stock	0s. 0½d.
Positives, i.e., films containing a picture and ready for exhibition	0s. 1d.
Negatives, i.e., films containing a photograph from which positives can be printed	0s. 8d.

The new ad valorem duties will be levied on the "C.I.F. value," i.e., the cost of the goods at the port of shipment for the United Kingdom, plus freight and insurance.

The changes contain no provision for a tariff preference in favor of the produce of other British countries, it having been stated by Premier Asquith in the British Parliament that these new Customs duties were specially designed to assist in correcting exchange difficulties.

Proposed duties on hats and plate glass have been withdrawn.

The Chancellor of the Exchequer has announced that motor vehicles, chassis, and parts, used exclusively for trade purposes, will be exempt from duty; and further that motor tires, which were first understood to be included in the item, are not liable to duty.

ADDITIONAL TRADE ENQUIRIES.

254. **Hardware Specialties.**—An English firm is desirous of getting in touch with Canadian manufacturers who are bringing out new ideas in specialties in the hardware line.

255. **Agencies.**—An agent in South Africa wishes to obtain agencies from Canadian manufacturers of bentwood chairs, enamelled ware or other lines connected with the hardware and furnishing trades. He claims to have a good connection and maintains a permanent sample room in Cape Town. Owing to the long distances between the principal centres in South Africa, he desires to state that in the arrangements to be made he would like to obtain part expenses.

256. **Taps and Dies.**—We can supply manufacturers with the name of a Canadian Government official in England who is in touch with a Scottish firm desiring to import engineers' taps and dies.

257. **Paper.**—An English firm is desirous of getting into touch with Canadian manufacturers who can supply newspaper in flat bundles of 500 sheets ranging in size from 56 x 82 c.m. to 64 x 95 c.m. The weight of the paper to be as nearly as possible 40 grams per square metre. Our correspondent is also interested in writing paper, strawboards and packing paper.

258. **Furnishing and Decorating Hardware.**—An English firm is desirous of getting in touch with Canadian manufacturers of all kinds of hardware used in the furnishing and decorating trades.

259. **Metal or Wooden Household Goods.**—An English firm is desirous of obtaining supplies of all kinds of kitchen utensils, turned goods, etc., from Canadian sources.

260. **Garden Novelties.**—An English firm wishes to communicate with Canadian manufacturers of lawn swings and seats and other garden novelties with a view to importing quantities of their goods into Great Britain.

DRIED VS. TINNED FOOD.

The impression that a great quantity of tinned goods is consumed in the trenches of Europe is erroneous, according to delegates to the Western Canners' Association in session here. While an immense quantity of tinned meats is consumed in the field, they said, dried rather than canned vegetables are mostly used. The association is made up of fruit canners.

Cable Address: DANMANCO

The Danville Manufacturing Co. Limited

Manufacturers of

WOODEN SHOE SHANKS
 BROOM HANDLES, SKEWERS
 PAPER ROLL PLUGS, &c.

Danville, Que.

A nice lot of Birch and Maple Broom Handles for sale,
 42 x 1 1/16 and 42 x 1 1/8.

ELECTRIC STEEL CASTINGS

WE CAN SUPPLY

*Carbon Manganese, Alloy, Steel Castings
Forging Ingots, Etc.*

Write for prices and particulars

The Electric Steel and Metals Company, Limited
WELLAND, ONTARIO.

MALLEABLE IRON CASTINGS

HIGH TENSILE STRENGTH



GALT MALLEABLE IRON CO.

LIMITED

GALT : : ONTARIO

NOVEL AUTOMATIC GEAR CHANGE.

One of the latest British inventions consists of a new type of automatic gear change for automobiles. Generally speaking, the speed gear comprises a straight-through gear box, operated by a central spindle. The spindle is connected to a spring-controlled sliding member which in its turn is adjusted longitudinally by the centrifugal governor above it. When starting the car the gear lever is shifted from neutral into either the first forward, or reverse positions. After the driven shaft has reached a certain speed, the centrifugal governor automatically brings the next gear into action; when the speed has again increased, the highest speed ratio is engaged similarly. Retarding the speed of the car causes the reverse series of operations to take place.—*Scientific American*.

FOR SALE.

An ideal Factory for making war munitions; centrally located, one story, 150 x 100 feet, with 1½ acres of ground. Good light, direct connection with three railroads. Natural gas and cheap electric power. Can be bought cheap. Apply Box 31, INDUSTRIAL CANADA.

STRATFORD MANUFACTURER MARRIES.

Mr. Charles A. Moore, who represents the Stratford Manufacturing Co., Stratford, Ont., in the Canadian Manufacturers Association, was married to Myrtle Beulah Harris of Stratford on Wednesday, October 27th.

“ELECTROLYTIC” OXYGEN

will positively give you better
WELDING and CUTTING
because it is 99.8% *PURE!*
We are supplying large quantities at lower rates than you pay for inferior gas. Write for quotations—we can save you money.

LEVER BROS. LTD.

OXYGEN DEPT.

T O R O N T O

BOILERS



STANDARD RETURN TUBULAR BOILER

We make boilers of all kinds for any service.

We are also sole Canadian makers of Erie City Water Tube Boilers, Vertical and Horizontal.

The large number of pleased and satisfied owners of "INGLIS" Boilers is our best advertisement.

For (52) fifty-two years our boilers have been the standard. We have installations of our different types of boilers, which our representatives will be pleased to show to prospective purchasers. Write us for prices, etc.

INGLIS' PRODUCTS ARE "MADE-IN-CANADA"

The John Inglis Company, Limited

ENGINEERS AND BOILERMAKERS

14 Strachan Avenue

Toronto, Canada

Ottawa Representative: J. W. ANDERSON, 7 Bank Street Chambers

UNITED STATES SALES TO CANADA.

Last Year Sales to Dominion Were Double the Purchases Made Here—Trade Statistics.

Twenty millions decrease is shown in the trade of the United States last year as compared with the previous year's return. The figures were \$4,258,504,805 in 1914 and \$4,278,892,383 in 1913, a decrease of \$20,387,578 during the year ended June 30th. The imports were valued at \$1,893,925,657, an increase of \$80,91,423 over the previous year 1913, while the exports were valued at \$2,364,579,148, a decrease of \$101,305,001 compared with 1913. The imports and exports for the year 1913 reached a higher mark than for any previous year in the history of the United States. For some years the balance of trade has been in favor of the United States—the excess of exports over imports in 1914 amounted to \$470,653,491. During the year 1914 the imports from non-British countries amounted to \$1,276,657,266 or 67 per cent. of the total imports, and from British countries at \$617,268,391 or 33 per cent., while the exports to non-British countries totalled \$1,298,945,650, or 55 per cent. of the total exports, and to British countries \$1,065,633,498, or 45 per cent.

United States Imports.

The imports into the United States during the year 1914—\$1,893,925,657—were the largest on record for that country. The imports from the United Kingdom exceeded the imports from any other country, being valued at \$293,661,304; Germany was next in order with an importation valued at \$189,919,136; and Canada was a good third, supplying goods of a value of \$160,689,709, suggests the Department of Trade and Commerce, Ottawa, in its analysis of the figures. The imports from other countries in order of importance were as follows: France, \$141,446,252; Cuba, \$131,303,794; British East Indies, \$11,903,527; Japan, \$107,355,897; Brazil, \$101,329,073; Mexico, \$92,690,566; Italy, \$56,407,671; Argentine Republic, \$45,123,988; Belgium, \$41,035,532; China, \$39,382,978; Netherlands, \$36,294,010; Chile, \$25,722,128; Switzerland, \$25,329,699; Spain, \$24,658,867; Russia, \$23,437,033; Turkey, \$20,842,097; Austria-Hungary, \$20,110,834; Philippines, \$18,162,312; Australia, \$17,088,534; Colombia, \$16,051,120, and British West Indies, \$15,550,859. An importation is shown for Canada and the United Kingdom for nearly every article mentioned in the import classification.

Canada Sells to States.

Among the principal articles imported from Canada the following were the most important during the year 1914:—Ammonia, sulphate of, \$345,953; asbestos, \$1,667,063; cattle, \$8,697,137; chicle gum, \$1,318,173; clover seed, \$820,461; coal, \$2,588,367; coke, \$340,767; copper ore, \$2,430,904; copper pigs, bars and ingots, \$5,211,880; cream, \$1,549,572; fertilizers, \$2,102,083; fish, \$7,168,283; flaxseed, \$10,561,662; furs, undressed, \$1,981,637; hay, \$1,616,859; hides and skins, \$8,885,437; horses, \$660,317; leather unmanufactured, \$2,217,419; meat products, \$2,727,519; milk, \$500,765; nickel ore and matte, \$5,621,480; oats, \$7,879,891; plaster rock or gypsum, \$496,855; printing paper, \$10,634,992; spirits, \$852,370; tea, \$864,814; vegetables, \$1,147,623; wheat, \$1,682,654; wood products, namely: boards, planks, deals and other lumber, \$16,936,930; laths, \$1,609,803; logs, \$1,564,572; pulpwood, \$7,245,466; shingles, \$2,190,049; wood pulp, \$5,908,517; and raw wool, \$1,110,324.

Customers of Uncle Sam.

The exports of United States produce, \$2,329,684,025, for 1914 were less than for the year 1913, but greater than for

any earlier year. The total exports to principal countries in order of importance were as follows:—United Kingdom, \$594,271,863; Germany, \$344,794,276; Canada, \$344,716,981; France, \$159,818,924; Netherlands, \$112,215,673; Italy, \$74,235,012; Cuba, \$68,884,428; Belgium, \$61,219,894; Australia and New Zealand, \$54,725,340; Japan, \$51,205,520; Argentine Republic, \$45,179,089; and Mexico, \$38,748,793. The exports to the United Kingdom in 1914 were slightly less than in 1913, while the exports to Australia and New Zealand were somewhat larger. During the same period the exports to Canada fell off \$67,635,469. From 1913 to 1914 the exports to Australia and New Zealand increased from \$33,273,645 to \$54,735,340, or about 64 per cent. in four years.—*Monetary Times*.

COMPETITION FOR SOUTH AMERICAN SHIPPING.

Prominent American and English shipping interests have formulated plans to enter the South Atlantic steamship field on an extensive scale in competition with the Atlantic, Gulf & West Indies Lines. To this end the American Merchant Marine Co., with a capital stock of \$3,000,000, has recently been organized under the laws of Delaware. The general management of the new enterprise will be under the supervision of Bowring & Co., one of the oldest shipping agencies in New York, which represent large English interests.

NATIONAL SAFETY BULLETINS.

The National Safety Council, of Chicago, distributes Safety bulletins to 2,000,000 workmen every week. These bulletins are short and to the point, and are printed in conspicuous type. The following are examples:

TO ALL OUR EMPLOYEES:

It is better to lose a minute in avoiding a possible accident than a month in nursing an injury.

GET THE SAFETY HABIT

When you see a person do a careless thing "Call Him Down," and don't be afraid of hurting his feelings.

SLIVER CAUSES DEATH IN THREE WEEKS

JOHN JENSON, of Eau Claire, ran a sliver in his finger on June 10th, while scraping a floor. He paid no attention to it until a week later. Too late!!!

He died from infection after suffering frightfully for two weeks.

REMEMBER JOHN JENSON

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Ass't General Manager

CAPITAL PAID-UP, \$15,000,000

RESERVE FUND, \$13,500,000

Extension of Canadian Trade

The Bank will make enquiries into the possibilities and requirements of markets abroad for exporters or importers who desire to extend their trade with British colonies or possessions. Owing to the large number of its correspondents and agents it has unusual facilities for this work.

THE ROYAL BANK OF CANADA

Incorporated 1869

Capital Authorized . . . \$25,000,000
Capital Paid up . . . \$11,560,000
Reserve & Undivided Profits \$13,000,000
Total Assets . . . \$180,000,000

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GREAT GROWTH OF UNITED STATES EXPORTS— EXCEEDED \$3,000,000,000 FOR YEAR.

Figures made public by the Bureau of Foreign and Domestic Commerce, Department of Commerce of the United States, show that for the first time in the nation's history exports exceeded \$3,000,000,000 in value for a twelve-month period. For the twelve months ending with August 31st, 1915, exports from the United States aggregated \$3,035,033,280, against \$2,280,185,791 in a like period one year ago. Twelve months' imports of merchandise totaled \$1,669,698,934, compared with \$1,906,657,515 last year.

The month of August showed exports valued at \$261,975,771, against \$110,367,494 in August, 1914, an increase of \$151,608,277, or 137 per cent. August imports totalled \$141,729,638, against \$129,767,890 in August, 1914, a gain of \$11,961,748, or 9 per cent. Thus, August trade this year shows an export balance of \$120,246,133, as compared with an import balance in August, 1914, of \$19,400,396, a favorable change of \$139,646,529.

Of the August imports, 70 per cent. entered free of duty, against 62 per cent. in August last year.

The international gold movements during the first year since the outbreak of the European war included imports of gold, \$244,004,045, against \$59,312,328 in a like period one year ago; exports of gold, \$97,749,270, against \$153,984,944 a year earlier.

The twelve months ending with August 31st, 1915, showed an excess of exports over imports of merchandise amounting to \$1,365,334,346, compared with \$373,528,276 in a like period one year ago and \$711,755,672 in a like period two years ago. It also recorded a net inward gold movement of \$146,254,775, compared with a net outward gold movement of \$94,672,616 in 1913-14, and a net outward movement of \$4,315,591 in 1912-13.

The aggregate foreign commerce of the United States in the year ending with August, 1915, the first year of the European war, was, including merchandise, gold and silver, \$5,129,715,002, against \$4,480,304,760 in the year immediately preceding the war. The net increase of \$649,410,242 for the year included a gain of \$754,847,489 in exports of merchandise and of \$189,749,922 in imports of gold and silver, and a decrease of \$236,958,581 in imports of merchandise and of \$58,228,588 in exports of gold and silver.—*New York Journal of Commerce*.

SALE OF COMPANY.

The property and business of E. I. du Pont de Nemours Powder Company, of New Jersey, has been sold and transferred to E. I. du Pont de Nemours & Company, of Delaware, a corporation organized for the purpose of taking over and carrying on the business.

The new company assumes all liabilities of the old company (except capital stock and funded debt) and will carry out all contracts of the old company, there being no change in the personnel of the management, operations or methods of handling the business. It will issue capital stock to the amount of \$120,000,000.00.

E. I. du Pont de Nemours & Company, the new corporation, bears the name of the original Delaware concern established 1802 by E. I. du Pont de Nemours. The return to the original name is a tribute to the founder and emphasizes the long establishment of the business.

The Du Pont Fabrikoid Company is controlled by the above company.



Patented

Bristle-shedding Brushes are one of the greatest detriments to doing good work quickly. The compressed, nickelled, steel ferrules on



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prevent the bristles coming out—this is one good point. Only the best materials enter their construction—another good point. The handles are of the common sense shape which will not cramp the hand—and so you might continue with many other features that mean long and satisfactory wear.

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Use Canadian-Made Fabrics for "Made-in-Canada" Garments!

To be consistent, the manufacturer who sells garments as "Made-in-Canada" should certainly use materials which are Canadian made.

CARRYING NO DUTY

"Dominion Textile" Cottons

give more value at a price
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UNITED STATES TO ENCOURAGE LEGITIMATE INDUSTRY.

(Trade and Commerce Bulletin.)

That the United States are proposing to take measures, which will counteract any unfair foreign competition against new American industries, established during the war, is apparent from the following letter, which Secretary Redfield has addressed to the Bureau of Foreign and Domestic Commerce. As commercial men in Canada will be interested in this question, owing to the similarity of conditions in the two countries, the letter is herewith reproduced:—

"If the question arises as to the attitude of the Department of Commerce toward what is called "dumping" after the war shall end, you may say that I shall recommend in my annual report that unfair competition from abroad shall not be permitted to injure a legitimate American industry any more than it is permitted to do so in our domestic field. Especially I shall oppose action on the part of any foreign monopoly toward controlling the American market by unfair competition in an attempt to injure or destroy an American industry. There is no doubt in my mind that this should be done. The more serious question to which consideration is being given is as to the method of doing it. Various plans have been proposed, some of which seem to permit reactions which are possibly undesirable. I am considering the methods used in different countries, with a frank preference for such as have nothing to do with tariffs or duties. I should be very glad to receive suggestions from practical commercial men as to the most effective means of detecting and preventing this unfair competition.

"You may be quite sure of my earnest purpose to provide, so far as it lies in my power to do so, that American industries shall not suffer from a type of unfair competition at the hands of foreign producers which would be forbidden if it took place at the hands of American producers."

U.S. FARM ASSOCIATIONS WILL MEET IN CHICAGO TO DISCUSS RURAL CREDITS.

The Third National Conference on Marketing and Farm Credits will be held in Chicago, November 29 to December 2. This Conference, while providing opportunity for discussion of all phases of agricultural development and organization, is intended chiefly to secure the framing of one or two bills to be presented to Congress at its coming session. It is believed that, by bringing representatives of the National Farmers' Union, the National Grange, state branches of the American Society of Equity and the National Council of Farmers' Co-operative Associations into one body where they can meet and discuss the various phases of proposed legislation with representatives of the American Bankers' Associations, the Farm Mortgage Bankers' Associations and the joint committee on rural credits of the United States Senate and House of Representatives, the short cut to immediate action will have been taken.

The meeting is unique, in that, notwithstanding the fact that it is called by the general committee of the National Conference on Marketing and Farm Credits, it is to constitute an open forum where delegates representing other organizations not only may participate in the discussion, but may vote upon action to be taken.

Additional significance is given to the meeting by the fact that the National Council of Farmers' Co-operative Associations, which recently won the fight against a proposed increase in grain freight rates, has decided to take up the matter of securing legislation bearing on rural credits.

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They last indefinitely too.

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NOVEMBER STEAMSHIP SAILINGS.

The following are the ocean sailings from Canadian ports in November:—

Australia.

Ty Sydney—Canadian-Australasian Royal Mail Line: From Vancouver, *Niagara*, November 24; from Victoria, *Niagara*, November 24.

Fiji.

To Suva—Canadian-Australasian Royal Mail Line: From Vancouver, *Niagara*, November 24; from Victoria, *Niagara*, November 24.

Hawaii.

To Honolulu—Canadian-Australasian Royal Mail Line: From Vancouver, *Niagara*, November 24; from Victoria, *Niagara*, November 24.

New Zealand.

To Auckland—Canadian-Australasian Royal Mail Line. From Vancouver, *Niagara*, November 24; from Victoria, *Niagara*, November 24.

NEW MANUFACTURING COMPANIES.

O'Brien Munitions, Ltd., Renfrew, Ont., munitions of war; capital, \$2,000,000.

Standard Steel Co., Ltd., Montreal, Que., steel pipes, culverts, agricultural implements, and also to manufacture war material; capital, \$200,000.

Canadian Tygard Engine, Ltd., Toronto, Ont., gasoline or gas engines; capital, \$3,000,000.

Societe Industrielle des Parfums Francais, Ltd., Montreal, Que., perfumes, soaps, dyes, powders, etc.; capital, \$99,000.

Canadian McCall Incinerator Co., Ltd., Toronto, Ont.; capital, \$300,000.

Specialty Bag Co., Ltd., Toronto, Ont.; capital, \$100,000.

The Solar Yeast Co., Ltd., Montreal, Que., yeast, malt; capital, \$100,000.

Chevrolet Motor Co. of Canada, Ltd., Toronto, Ont., vehicles of every description for the transportation of passengers; capital, \$500,000.

Peerless Hosiery, Ltd., London, Ont.; capital, \$60,000.

Dominion Brake Shoe Co., Ltd., St. Thomas, Ont., iron and steel castings; capital, \$200,000.

Fairn Cooke, Ltd., Toronto, Ont., toys; capital, \$75,000.

The Gowlland Optical Co., Ltd., Montreal, Que., optical and scientific instruments of all kinds; capital, \$1,000,000.

Canadian Chadwick Metal Co., Ltd., Dundas, Ont., mechanical engineers, tool makers, etc.; capital, \$40,000.

Ontario Cartridge Co., Ltd., Ford, Ont.; capital, \$40,000.

Elora White Lime Co., Ltd., Elora, Ont.; capital, \$100,000.

Standard Toys, Ltd., Toronto, Ont.; capital, \$40,000.

Orillia Molybdenum Co., Ltd., Orillia, Ont., ore refiners; capital, \$200,000.

Lindsay Factories, Ltd., Toronto, Ont., metals, wood and other materials; capital, \$50,000.

The Milton Textiles, Ltd., Toronto, Ont., wools, silk, cotton, plush, etc.; capital, \$100,000.

Reliance Harness Works, Ltd., Toronto, Ont.; capital, \$40,000.

Multifile Co., Ltd., Toronto, Ont., office devices; capital, \$50,000.

The Elkhorn Lime Co., Ltd., Madoc, Ont.; capital, \$250,000.

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All steamers fitted with refrigerators for the carriage of perishable freight.

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TRADE ENQUIRIES

The Weekly Bulletin of the Department of Trade and Commerce, from which some of these enquiries are taken, should be read regularly by those interested in foreign trade. It will be sent free on application to the Department at Ottawa.

229. **Book Papers.**—We are in receipt of samples of various kinds of fine book paper from a London firm, giving the Bank of England as reference. They claim to be large buyers of this quality of paper, and would like to see samples and have lowest price f.o.b. New York from Canadian manufacturers. The English samples can be supplied from this office on application.

230. **Motorcycle Parts.**—A Wolverhampton firm is prepared to purchase motorcycle parts. Full particulars and prices c.i.f. Liverpool should be sent.

231. **Bentwood Bands for Trunks.**—A Liverpool firm desires the address of Canadian manufacturers who can furnish bentwood for bands for trunks.

232. **Automobile Accessories.**—A British firm is open to purchase large quantities of motorcar and motorcycle stampings, forgings, pressings, etc., or anything connected with pleasure car, commercial lorry or motorcycle work. Prices delivered Birmingham. State time necessary to execute orders.

233. **Ironmongery.**—An English firm is open to buy iron and brass screws for wood; also bolts and nuts and wire nails. Prices delivered Bedford, England.

234. **Newsprint.**—An Australian firm of merchants and agents desires to get in touch with a good Canadian mill making newsprint paper, not already represented in the territory of New South Wales and Queensland. Present requirements being in lots of from 100 to 200 tons in substance 24 x 36-31½ pounds, 500 s., on reels (6,000 yards), 39 inches and 43½ inches wide (equal quantities of each width). Cash against documents on arrival of steamer.

235. **Pulp and Asbestos.**—A French commission firm desires to get in touch with Canadian concerns who wish to sell their products in France on a commission basis.

236. **Wood Goods.**—A London company interested in all branches of the wood trade, as brokers or agents in sawn wood, pulp-wood, props, telegraph poles, bentwood furniture, spokes and wheels, spoolwood, silver spruce, sawn or planed hardwoods, or as merchant buyers on their own account in boxboards, plywood, match splints, dowels, broom handles, and squares for making broom handles, is prepared to act for Canadian manufacturers and shippers. Quotations c.i.f. United Kingdom essential.

237. **Disinfectants; Concentrated Lime Sulphur.**—A Cape Town commission firm asks for samples and quotations on disinfectants. They are also prepared to purchase and advertise or handle on commission a brand of highly concentrated lime sulphur.



Cut of 50-inch "Extra" Double Belt

Made by The J. C. McLaren Belting Co., Limited.

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ALL KINDS OFBELTING
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238. **Spectacle Lenses, Frames and Rimless Mounts.**—A firm of dispensing opticians in Manchester wishes to be placed in touch with Canadian manufacturers of ordinary spectacle lenses and all kinds of spectacle frames and rimless mounts.
239. **Blankets.**—Canadian manufacturers of cotton blankets are asked to correspond with a St. John's firm.
240. **Toys, dolls, etc.**—An English firm desires to communicate with Canadian firms in a position to supply them with leading novelties in toys, dolls, etc., suitable for the coming Christmas season. They do a cash trade and are open to take up an agency for Canadian goods. Illustrated catalogues with prices are desired.
241. **Enamelled Ware.**—A firm of hardware merchants in the south of England desires to get into communication with Canadian manufacturers of enamelled ware.
242. **Bentwood Chairs.**—A Midlands firm asks to be placed in touch with Canadian manufacturers of bentwood chairs.
243. **Household Utensils, Ironmongery, Wooden Handles.**—A British firm would like to hear from manufacturers of the following articles: All kinds for domestic use made of wood, tin or iron; mechanics' hand tools; wire nails; nuts and bolts; wooden handles. Prices should be delivered Birmingham.
244. **Ironmongers' Supplies.**—A firm in England is in the market for the following: Stamped steel butts, stamped steel blackflaps, bolts and nuts, wire nails, tower pinners, all kinds of plyers, washboards, all sorts of enamelware, tee hinges, all kinds of cycle goods, wrenches, cycle bells, hand bells and cycle pumps, etc. Prices must be delivered Birmingham.
245. **Pianos.**—A firm in England already importing Canadian higher grade pianos is open to purchase a cheaper grade in addition, which would sell at about \$100. Prices should be delivered Liverpool.
246. **Wire Nails.**—A firm in Birmingham submits the following specification: Canadian manufacturers please quote lowest prices and best export cash terms c.i.f. Penang for:—
- | | | | | | | | | |
|--------|----|----|----|----|----|----|--------|---------|
| Sizes: | 1½ | 2 | 2½ | 3 | 4 | 5 | 6 | inches. |
| Gauge: | 12 | 10 | 9 | 7 | 6 | 5 | 3 | |
| | 40 | 60 | 60 | 40 | 20 | 15 | 15—250 | kegs. |
- Please state earliest delivery first lot.
247. **Accumulators, Screws and Bulls-eyes.**—A Birmingham firm is open to purchase 200,000 accumulators for pocket-flash lamps. They are also in a position to buy yearly 300,000 gross of brass and iron-wood screws, principally ½-inch by 4-inch round heads (samples should be submitted; prices delivered Liverpool), and are prepared to place orders for large quantities of glass bulls-eyes for pocket-flash lamps.
248. **Brass Globe Holders.**—A firm in England can place an order for one million brass electric globe holders. Quotations should include delivery Birmingham. (Samples can be seen at the Department of Trade and Commerce, Ottawa.)

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MANUFACTURERS OF

WHITE VICTORIA
LAWNS

WHITE NAINSOOKS

and

DYED COTTONS

OF EVERY DESCRIPTION

249. **Ironmongers' Supplies.**—A British firm will consider quotations delivered Birmingham on washboards, rope, twine, nuts and bolts, screws and wire nails.

250. **Nuts and Bolts.**—A Birmingham firm asks for quotations on the following specifications of tire and sleigh bolts and nuts, packed in parcels or cartons of 100, and delivered Liverpool:—

Sleigh Bolts and Nuts.— $1\frac{1}{4}$, $1\frac{1}{2}$, $1\frac{3}{4}$, 2, $2\frac{1}{4}$ inch x $\frac{1}{4}$ inch; $2\frac{1}{2}$, $2\frac{3}{4}$, 3, $3\frac{1}{4}$, $3\frac{1}{2}$, 4 inch x $\frac{3}{8}$ inch; 6m/m x 60 m/m, 6 m/m x 50 m/m— $1\frac{1}{2}$, 2, $2\frac{1}{4}$, $2\frac{1}{2}$ x 5-16. All black.

Tire Bolts and Nuts.— $2\frac{1}{2}$ x 5-16, $2\frac{3}{4}$ x 5-16, 3 x 5-16, $3\frac{1}{2}$ x 5-16, $3\frac{3}{4}$ x 5-16, 4 x 5-16, $4\frac{1}{2}$ x 5-16. All black.

251. **Fencing Wire.**—A firm in Birmingham inquires for the following fencing wire, price to include delivery to Buenos Ayres: Best drawn, round, galvanized steel fencing wire, in rolls of 40 kilos., assorted to—9 gauge x 480 metres; 10 gauge x 610 metres; 11 gauge x 743 metres; 12 gauge x 930 metres. In close bundles, without canvas, each bundle to contain one continuous piece of wire. The breaking strain of the wire should be 35 tons square inch. Small sample must be submitted.

252. **Wood Pulp (Cellulose).**—A firm in Italy is in urgent need of wood pulp from Canada. Immediate communication is desired, with samples, prices, and terms.

253. **Stockinette, Flannelette, and Other Cloths.**—A London firm who are prepared to place orders for considerable quantities of stockinette, flannelette, and other cloths used in the manufacture of ladies' dressing gowns, wish to get into touch with Canadian manufacturers who can quote for their requirements. Samples of the various cloths are in the possession of the Department of Trade and Commerce.

TEACHING THE BLIND.

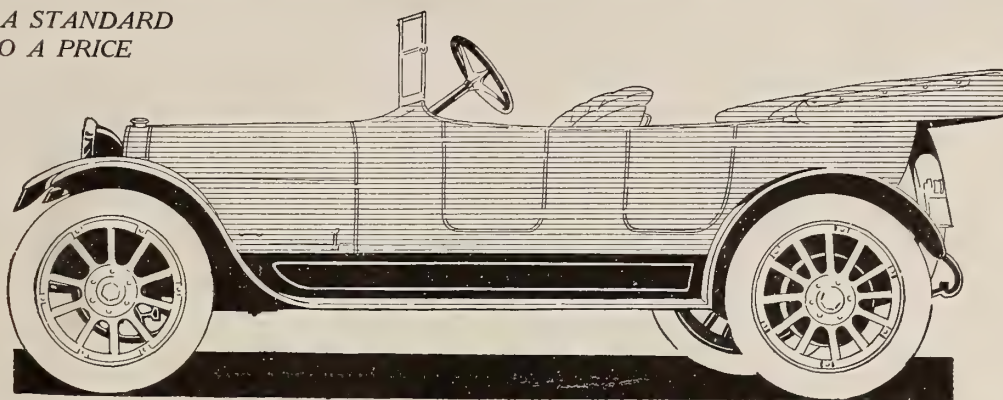
The National Institute for the Blind, 224 Great Portland Street, London West, England, has established a convalescent home at Brighton for blind soldiers and sailors who have been invalided to England from the front. The blind men are sent to Brighton for any rest or change necessary during the period of their training at St. Dunstan's. Among the inmates at St. Dunstan's there are at the present time five members of the Canadian Expeditionary Force, and more are expected. The National Institute for the Blind are instructing these men in some occupation at which they will be able to earn their living. In addition to these special duties the National Institute for the Blind produce almost the whole of the literature which is read by blind people.

The generous support of Canadian manufacturers is solicited for this deserving charity.

LARRIGANS ORDERED.

Tenders will be called for immediately for "Larrigans" to be supplied this winter for Canadian soldiers at the front and training in England.

MADE UP TO A STANDARD
NOT DOWN TO A PRICE



RUSSELL Light Six \$1475

When you step through the wide doors of the Russell Light Six, and stretch out in the deep, well-cushioned tonneau, you realize the importance of *length* in a motor car. The day-after-day pleasure of driving in a big, roomy car makes *long wheel-base* a thing to be demanded.

When you turn off the macadam on to the rough, unmade roads, you are grateful for the *extra clearance* Russell designers have provided in this car. Safety and freedom from annoying break-downs loom large in the family touring car.

*The Russell Light Six has a wheel-base of 121 inches.
Road clearance 10½ inches. Tires 33 x 4 inches.*

Motor—Continental 3½ in. bore x 4½ in. stroke, a unit with transmission and clutch. WESTINGHOUSE two-unit electric starter and lighting system with double-bulb searchlights. UNDERSLUNG REAR SPRINGS, FULL-FLOATING REAR AXLE, with worm-bevel gears. VACUUM FUEL FEED, ONE-MAN TOP. NON-SKID TIRES on rear wheels. European Streamline body with oval fenders. Touring—\$1475. Cabriolet—\$1825.

RUSSELL MOTOR CAR CO., LIMITED

Executive Offices and Works:
West Toronto

Branches: Montreal, Toronto
Hamilton, Winnipeg, Vancouver

Sole Canadian Licensees
Knight Motor

**COTTON
& WOOL
WASTE**

Made in Canada

BRANDS:

Cotton Polishing: Cream.

White Cotton Wiping:
XXX Extra, X Grand,
XLCR, X Empire, X
Press.

Colored Cotton Wiping: Fancy, Lion, Standard,
Popular, Keen.

Wool Packing: Arrow, Axle, Anvil, Anchor.

Washed Cotton Wipers: Select White, Mixed Colored,
Dark Colored.

Packed in Compressed Bales 500, 200, 100, 50, 25, 10, 5 lbs.

No liquid dope or clay used in any of our brands—nothing but threads.

**WASHED
COTTON
WIPERS**

SCYTHES & COMPANY, LIMITED

MANUFACTURERS AND JOBBERS

Also headquarters for Cordage, Twines, Cotton Duck
Oiled Clothing, Etc.

TORONTO
MONTREAL

AMONG THE INDUSTRIES

We direct the attention of our readers to this department, which has greatly enlarged and improved. Arrangements have been made to secure interesting news of manufacturing from all parts of Canada. We shall be glad to publish items of interest to manufacturers free of charge in this department provided they should not be properly classified as advertisements. If you have interesting items please send them in.

BRITISH COLUMBIA.

Barnet, B.C.

Under the name British Pacific Construction and Engineering Co., a company has taken over the works formerly occupied by McDonald, Godson and Co., at Barnet, near Vancouver, and have installed the requisite machinery and plant for the construction of steel ships and vessels. About two hundred men will be employed.

New Westminster, B.C.

The Schaake Machine Co., Ltd., has been incorporated in Westminster to carry on the business of marine engineers and general machinists, under the management of Mr. Henry Schaake, formerly manager of the Heaps Engineering Co., Ltd.

North Vancouver, B.C.

A match factory has been established at North Vancouver, and will shortly be in operation. This is the only industry of its kind on the coast at present, the Dominion Match Co. having closed down some two years ago, after a very short period of activity.

Port Moody, B.C.

The Port Moody Steel Works, Ltd., has been incorporated with \$150,000 capital, to establish a steel rolling mill at Port Moody near Vancouver. A large quantity of machinery has been ordered from Cobalt, Ont., and the mill is expected to be in operation within three months.

Vancouver, B.C.

The Vancouver Toy and Novelty Co., Ltd., has been formed, with a capital of \$25,000 for the manufacture of wooden toys and fancy goods.

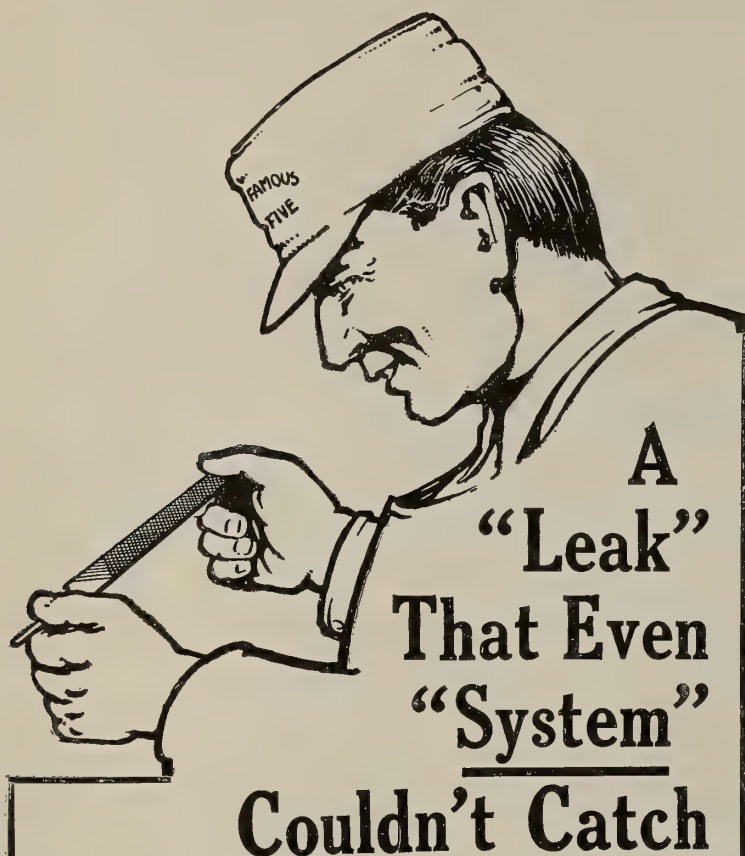
The Duchesnay Packing Co., Ltd., of Vancouver, with works at Ladner, have received large orders for desiccated vegetables for the European market, and are quadrupling their present factory.

Graham and Co., Ltd., of Belleville, Ont., have announced their intention to establish immediately four factories in British Columbia for the manufacture of desiccated vegetables, two at Kelowna, and one each at Vancouver and Port Moody. About fifty hands will be employed at each.

A syndicate is in process of formation for the operation of a process for the manufacture on a large scale of zinc oxide direct from zinc ores, the plant to be erected near the coast.

Every machine shop of any size on the coast is engaged in the manufacture of shells, the majority working double shift.

The copper mining industry is experiencing a period of activity, and every smelter in the province is now working. It is anticipated that the production of copper for the current year will exceed that of any previous year.



A MANUFACTURER was boasting that his shops were so systematized, no "leak" nor waste could possibly occur.

We knew something of his product—equipment—methods—and output. So we asked how many files he used each year.

When he mentioned the figure, we said we could show him a "leak" that would astonish him.

"Do it," he said.

And we did!

Showed him how his workmen were using their files too long. Were wasting time getting the last bit of wear from each file—instead of discarding them when their BEST efficiency was gone. Were saving "pennies" in **file-cost**—and throwing away "dollars" in **filing-time**.

We proved to him—by personal experience in his own shops—on his own work—that the more files he used the more money he **SAVED**. That the time saved and the extra work produced by using only **EFFICIENCY** files, more than paid for the slight extra cost of additional files. While his old way of **wearing-out** files costs many times its price in wasted labor.

He "saw the light." To-day, his workmen use only **EFFICIENT** files. And of course they're the "Famous Five":

**Kearney & Foot
Great Western
American, Arcade
Globe**

(Made in Canada)

NICHOLSON FILE COMPANY
Port Hope DEALERS EVERYWHERE Ontario



A moderate-priced Louis Seize Bedroom Suite finished in White or Ivory, or Pearl or French Grey Enamel.

THE strongest argument in favour of our furniture is comparison with ordinary furniture.

After you have admired the general effect of our designs, study carefully their simplicity and strength of construction and the minute attention to details. Notice the beautiful matching of the woods, the thorough, conscientious workmanship even in the corners and parts that are not usually seen. Feel how smoothly the drawers run in and out. Observe how in everything even to the drawer-pulls the object has been to turn out a piece of furniture that follows in integrity of workmanship and fidelity of design, the cherished pieces of our forefathers made "before the world was in a hurry."

Every progressive dealer is our representative. Ask him to show you what he has in our line, or write to us for particulars.

Our Handsome Book on Period Furniture

describes fully the prevailing period styles and how to distinguish them. It is not a catalogue, nor is it particularly an advertisement for ourselves. Indeed, it is more of a practical, illustrated guide-book to good furniture—interesting and informative—than anything else we can think of. It will be sent to your address for the nominal sum of 25c in stamps or silver. This amount does not even begin to cover the cost of printing let alone postage and packing. But we want you to become interested in better furnishings, not necessarily in our furniture, although that is expected, but in good furniture of any kind. We feel sure when you do that your interest will extend to our furniture as a matter of course.

TORONTO FURNITURE CO., LIMITED
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Northern Aluminum Co.

LIMITED

1305-6 Traders Bank Building Toronto, Ont.

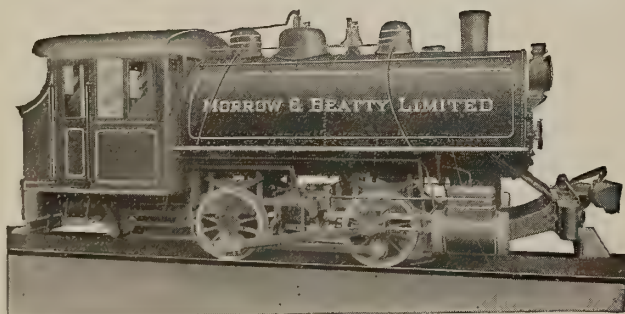
Sheet, Ingot, Rod,
Wire, Tubing,
Rivets, Extruded
Shapes, Bronze
Powder and Fabric-
ated articles.

We solicit
your enquiries
and will be glad
to serve you. Our
experience and know-
ledge of the metal will be
of value to you.

Write Us

NORTHERN ALUMINUM CO., LIMITED

INDUSTRIAL LOCOMOTIVES



Best results are obtained from a locomotive only when designed and built to meet special service requirements.

Our standard light locomotives were designed after a careful study of the conditions under which they must operate.

Every piece of material entering into their construction must undergo a thorough test and conform to the same specifications required for the largest locomotives. Only the best materials are used, insuring long life and satisfactory results.

Write us when you want a locomotive.

MONTREAL LOCOMOTIVE WORKS, LTD.

Dominion Express Building, Montreal, Canada

Further considerable orders for lumber have been received by coast mills for shipment to Europe, and the majority of the mills are now working full time, with some working double shift. A beneficial feature of the British Government orders is that the chief grade required is the one which is more difficult to market locally at present. Very large orders for box shooks for Europe are also in the market, and when arrangements are completed it is expected all box factories on the coast will be working double shift.

The premises of the Cooder Rustproof Screen and the Imperial Trunk Co., were recently gutted by fire in Vancouver.

The canvas glove, knitting and shoe factories in Vancouver are all working full time on export orders recently received.

NEW BRUNSWICK.

St. John, N.B.

A site of 20 acres at Washademoak, N.B., has been purchased by Daley & Carvell, and they will build a factory for the manufacture of axes, etc.

NOVA SCOTIA.

Halifax, N.S.

The directors of the Nova Scotia Underwear Company have declared the dividend on the preferred stock due Nov. 30. This action was taken since the complete destruction by fire of the company's plant at Eureka this week. The company was at work on a large order for the Italian Government, and had a good year up to the time of the fire. There was \$165,000 insurance.

ONTARIO.

Acton, Ont.

The Wallaceburg Knitting Company's plant may be moved here. The town will be asked for a loan of \$10,000.

Cobourg, Ont.

A picture theatre, estimated to cost \$20,000, will be started next spring.

Dryden, Ont.

A by-law will be voted on to authorize the expenditure of \$5,000 on the installation of a telephone system.

Georgetown, Ont.

The by-law to grant assistance to the Glass Garden Builders has been passed. The company will erect a factory for making greenhouses.

Hamilton, Ont.

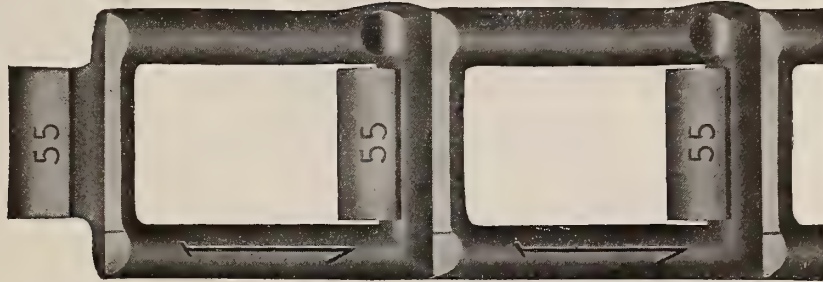
An addition will be built to the factory of the National Paper Goods Company.

Construction work will begin shortly on the \$250,000 factory to be erected by the Mercury Mills Company.

An addition, 100 x 160 feet, to the main foundry building of the Dominion Steel Foundry Company, is nearing completion. The company has installed in this addition one 25-ton acid open-hearth furnace and one 30-ton Shaw electric 4-motor crane. A complete outfit for machining 3-inch British shrapnel shells and machinery for finishing 4.5 howitzer shells has also been installed.

The W. T. Rawleigh Company, whose head office is in Freeport, Ill., are going to build a factory here 120 feet by 60 feet deep, four or five stories high. The Rawleigh Company manufacture all kinds of proprietary medicines.

Why You Run No Risks in Buying When You Specify JEFFREY CHAINS



Developed to withstand the most exacting requirements, they combine Highest Tensile Strength with all the other qualities that go to make for Dependability, Durability and Lasting Service.

They are made complete in our own foundries and shops, by the most improved methods, and by men who are experts in their line.

A Rigid System of Inspection eliminates the possibility of Defective Links or Parts in the finished chain. By means of our Special Testing Machines every Jeffrey Chain is subjected to the pull of a final proof test load far in excess of any possible working stress. (Make a test in your own shops and you will confirm our claims.)

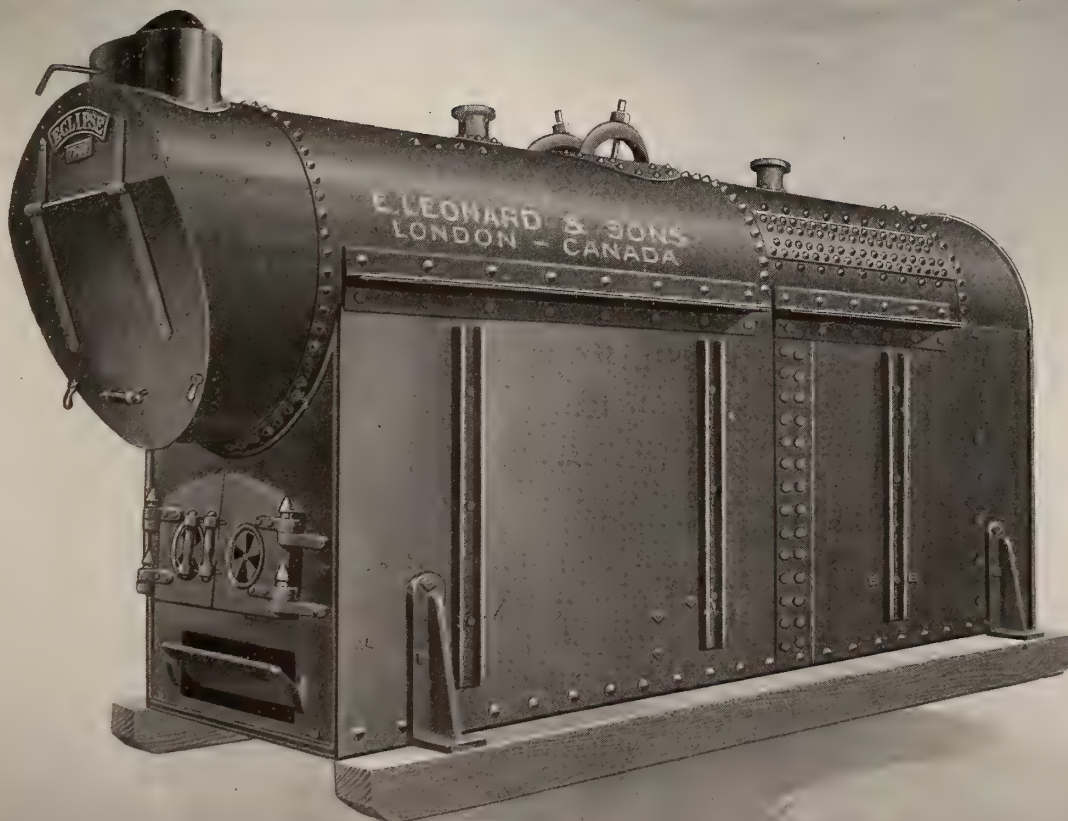
We have been building Chains for 35 years and can furnish types for all Elevating, Conveying and Transmission Requirements. Write for our General Catalog No. 83-3 fully describing their service application.

We carry a large and complete stock of Chains, Elevator Buckets, Sprocket Wheels, Gears, Spiral and Belt Conveyors, etc.

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**E. LEONARD
and SONS**
London,
Canada

Eclipse Semi-Portable Return Tubular Boiler, saving brick work. All Sizes.

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We Are Ready for War

Can supply every Canadian Manufacturer and Jobber with their entire requirements of Steel and Brass Compression GREASE CUPS, Plain, Ratchet or Leather Washer Types, any finish desired. Also all styles of Oil Hole Covers.

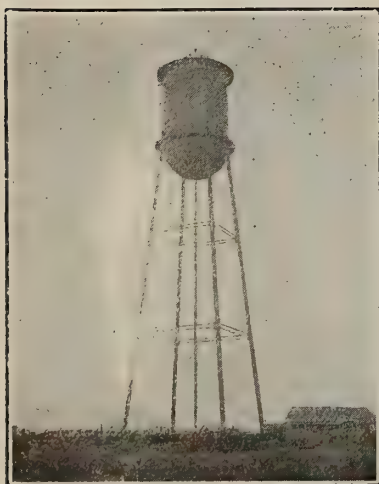
A NEW ONE



Hinge Lid Pressed Brass Oil Cup

With Syphon Feed, if desired. No order too large to ship from stock. Anything special you have been importing we will gladly make to your order. If your Jobber can't supply you with WINKLEY Cups write us for prices and Catalogue.

CANADIAN WINKLEY CO., LTD.
WINDSOR, ONTARIO



Canadian
Chicago Bridge & Iron Works
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ELEVATED STEEL TANKS AND STANDPIPES

For Municipal, Railroad
and Factory Service

We also build Oil Tanks, Coaling Stations, Bridges, Turntables, Buildings and Structural Material. Write for illustrated Catalogue No. 25.

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Shops:

BRIDGEBURG, ONTARIO
Greenville, Pa. (Pittsburg District)
Chicago, Illinois



NOTICE

To Manufacturers, Dealers
and Users of Steam Boilers.

All steam boilers built in, or entering the Province of Ontario, and boilers exchanged or repaired, are subject to Government Inspection as prescribed in the Steam Boilers Act, 3 George V., C. 61.

Before any work of repair or alteration is commenced on any boiler, notice must be sent to the Department stating the nature and extent of the repairs or alterations proposed to be made. If the Chief Inspector should consider such repairs or alterations of an extensive character, the boiler must be inspected in accordance with the Regulations by an Inspector authorized under the Act.

All communications should be addressed to the Steam Boiler Branch, Department of Public Works, Parliament Bldgs., Toronto.

HON. FINLEY G. MACDIARMID, **D. M. MEDCALF,**
Minister of Public Works. Chief Inspector of Steam Boilers.

Mitchell, Ont.

The oatmeal mill of the Canadian Cereal Company in Seaforth has been bought by The Walter Thompson & Son Company.

Mount Brydges, Ont.

The Crow Auto Company are building their factory by day labor.

Newmarket, Ont.

A by-law is contemplated to guarantee the bonds to the extent of \$15,000 of a boot and shoe concern, as an inducement to locate here.

Owen Sound, Ont.

The Canadian Malleable Iron Company and the Owen Sound Iron Works Company are about to equip their plants for the manufacture of 60-pound high explosive shells.

Petrolia, Ont.

The Town Council, at a special meeting held recently, decided to take over the electric light plant at \$11,280.

The Marine City Sugar Company is contemplating establishing a plant, which will cost about \$800,000.

A by-law will be submitted to the ratepayers in connection with the proposed beet sugar refinery.

Port Stanley, Ont.

The erection of a pavilion in connection with the new electric railway is being considered by the Utilities Commission.

Thorold, Ont.

All work in connection with alterations now being carried out at the Grand Trunk Railway Station will be done by the company.

Weston, Ont.

The offices of the Toronto Structural Steel Co., Limited, have been moved from Atlantic Ave., Toronto, to Weston.

Windsor, Ont.

An extension, costing \$10,000, will be made to the factory of the Kelsey Wheel Company.

Zurich, Ont.

An implement shop is about to be erected by F. Hess, Sr., at an estimated cost of \$3,000.

QUEBEC.

Montreal, Que.

A permit has been received by Pilkington Bros., for the erection of a new factory.

A plant will be built by the National Paper Company for the manufacture of coated paper at an estimated cost of \$100,000.

Sherbrooke, Que.

Tenders are in for the proposed gas plant and the City Council will probably engage an expert to examine and report on the tender before awarding the contract.



By Royal Warrant

“Canadian Club” Whisky

Fully Ripened in Wood. Age Guaranteed by Government.

QUALITY UNEXCELLED

Distilled and Bottled by

HIRAM WALKER & SONS
LIMITED

Walkerville, Canada

LONDON
MEXICO CITY

CHICAGO
VICTORIA, B.C.

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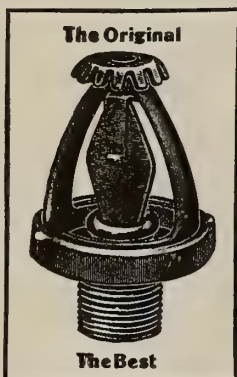
PURDY, MANSELL LIMITED

TORONTO

Cut your Insurance in half by having us
instal an

Automatic Fire Sprinkler System

throughout your Factory, Store or Ware-
house.



Write us for Estimates

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CHIEF OFFICE FOR CANADA, TORONTO



ALFRED WRIGHT, Manager, 8 Richmond St. E.

POWER PRESSES

DROP AND SCREW

SHEET METAL
STAMPINGS
DIES AND TOOLS



W. H. Banfield & Sons

120 Adelaide W. - Toronto

NOTICE TO TRADERS WITH ROUMANIA.

The Commercial Intelligence Branch of the Board of Trade is advised that in view of the difficulties at present existing in regard to Exchange between the United Kingdom and Roumania, sellers of goods ordered thence would do well to require cash in London in advance. It is understood that business is already being conducted on this basis.

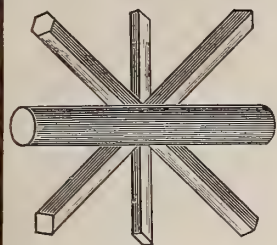
It may be explained that the law now in force in Roumania legalizes payment of sterling indebtedness at the par of 25.22 lei per £ (and that no agreement to pay at a different rate would hold at law there), whereas the collecting bank would have to pay a very much higher rate (say some 15 per cent. higher) for a draft on London.—*Board of Trade Journal.*

THE ROCKEFELLER PRINCIPLE.

The tribute which young Mr. Rockefeller paid to his father, when he was entertained by the Chamber of Commerce at Denver, is calculated to excite admiration for his filial devotion, however much allowance may be made for natural bias. The reputation which the elder man acquired when building up his great fortune from the development of the petroleum industry, rests upon business methods and the use of corporate powers rather than personal qualities, and all that is said about his democratic ways and kindly feeling may be true without materially affecting that. Still, there never has been any evidence that the Standard Oil Company and its subsidiaries of the Rockefeller interests in general, have treated those employed in their service in any but a fair, even a liberal, way so far as it depended upon them.

But what is of special interest now, in connection with the recent labor troubles in Colorado, is not the personal characteristics and behavior of the Rockefeller family, but the avowed principles of the younger man in regard to the relation of capital as employer, and labor as the employed, principles, he declares, which are derived from the practice of his father. The main principle, as declared at the Denver meeting with the leading business men of Colorado, is that labor and capital are partners and not enemies. The workers should have an interest in the business in which they are employed and representation in its management. That is claimed to be the Rockefeller idea, and the plan proposed for settling the Colorado Fuel & Iron Company's trouble is based upon it.

Mr. Rockefeller expressed his belief in labor organization, labor unions in different trades and occupations, provided every worker is left "free to associate himself with such groups or to work independently." He made it clear that he did not believe in any outside control or interference between employers and those employed, but a union and co-operation of these forces in their own interest and for their mutual advantage. It is upon this principle that the plan adopted for the Fuel & Iron Company is based. "A spirit of democracy underlies our industrial plan," said the guest of the Denver Chamber of Commerce. There must never again be a strike in the company in which his father is interested. The officers of the Colorado company had been instructed to that effect, and the "co-operation of every citizen of Colorado" was asked. The Rockefellers have been considered to be very practical men. This looks rather like an ideal scheme, which would be the best possible thing if it could be made to work, just as peace between nations would be. In the present condition of human nature and stage of industrial progress, is it practicable? Perhaps we shall see, and the example will be watched with interest.



COLD DRAWN, TURNED AND POLISHED STEEL

SHAFTING

ROUNDS, SQUARES, HEXAGONS AND FLATS

 $\frac{1}{8}$ in. to 6 in. Dia. $\frac{1}{4}$ in. to $2\frac{1}{4}$ in. $\frac{1}{4}$ in. to $2\frac{1}{4}$ in.up to $1\frac{1}{2}$ in. x 3 in.

FREE CUTTING SCREW STOCK

PISTON AND PUMP RODS

FINISHED KEYS

The CANADIAN DRAWN STEEL CO., Limited
HAMILTON, ONTARIO

UNION DRAWN STEEL CO., Limited

HAMILTON, ONTARIO

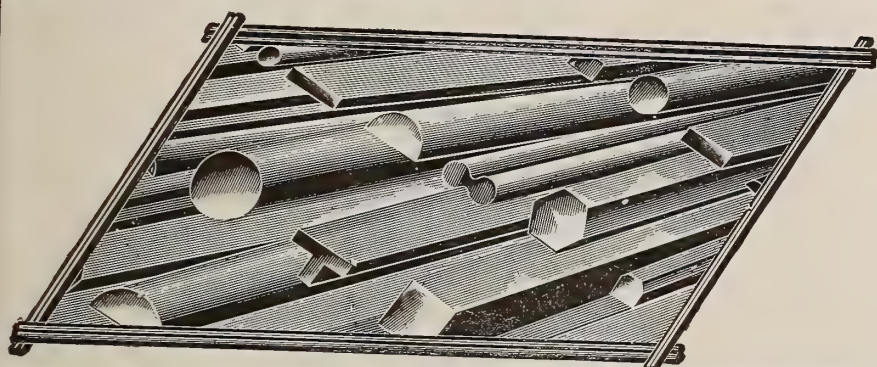
MANUFACTURERS OF

Shafting

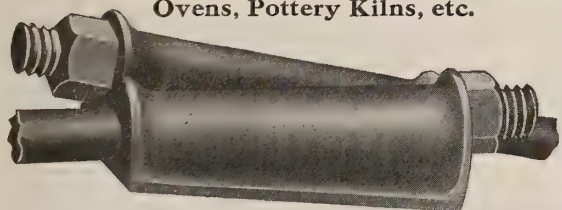
Rounds, Flats, Squares
and Hexagons

LARGEST STOCK IN CANADA

Get prices before ordering elsewhere.



LUGS FOR BANDS

On Silos, Tanks, Water Pipes, Penstocks
Ovens, Pottery Kilns, etc.Ask
for
Price
ListFor round Rods $\frac{3}{8}$ to $1\frac{1}{2}$ inch

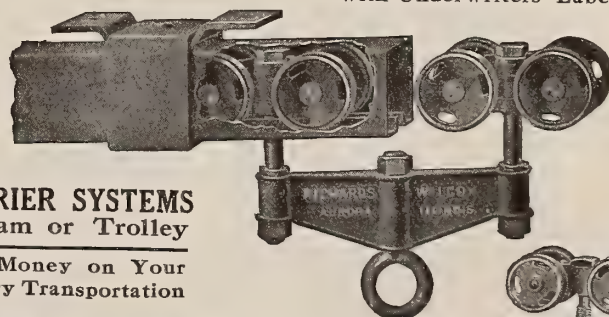
Flat Bands 2 to 6 inches wide

Best Malleable Iron—Prompt Shipments.

OTTERVILLE MFG. CO., LIMITED
OTTERVILLE, ONT.



Parallel Door Hardware

Fire Door Hardware—All Styles
with Underwriters' Label

CARRIER SYSTEMS

I-Beam or Trolley
Save Money on Your
Factory Transportation

BULLDOG STEEL
JOIST HANGERS
They never let go!
Stronger than
malleable

"R-W" HANGERS
and Carrier Systems
are specified by lead-
ing architects and
engineers throughout
Canada and the United
States. Catalogues and
estimates will be
cheerfully furnished.

Richards-Wilcox
CANADIAN COMPANY, LTD.
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"R-W"
Trolleys
are best for
all sliding
doors

EXPORTERS OF

Reed Organs, Piano Stools,
Music Cabinets.

Catalogue B.



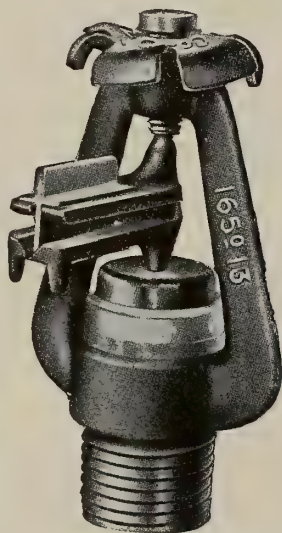
The Goderich Organ Co. Limited
GODERICH, CANADA



Closet Seats,
Flush Tanks,
Medicine Cabinets,
Everything for the Bath Room.

Write for Catalogue C. and Price List.

\$20⁰⁰ instead of \$100⁰⁰
will pay
Your Insurance Premium



The balance will install a complete system of Manufacturers' Automatic Sprinklers.

Let us prove the truth of above statement.

"THE
 EVER READY
 WATCHMEN"

Call or write us.

The General Fire Equipment Co.
 LIMITED

72 Queen St. E.

Toronto, Can.

Hear Us For Our Cause !



We want
 to equip your
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**Esty
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and show you
 how to reduce
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IT'S A GREAT BIG MONEY SAVER.

Write :

H. G. VOGEL CO. CANADA LIMITED
 169 Duke St., MONTREAL, P.Q.

BEEF FACTORY FOR CHATHAM.

At a meeting of the directors of the Dominion Sugar Company, of Wallaceburg, Ont., it was decided to start at once the erection of a million-dollar beet sugar factory in Chatham. The directors have been assured by representative citizens of Chatham that the city will pass a by-law granting the company a free site worth \$18,000 and annex the property to the city and provide other minor inducements. The citizens have also guaranteed the company that they will receive contracts for 8,000 acres of beets the first year. Committees of citizens will canvass among the farmers for these contracts. The factory will be situated at the west end of the city and during the busy seasons will employ upwards of 300 men.

IF I KNEW YOU AND YOU KNEW ME.

H. W. Petrie, Ltd., have sent us the following, which will appeal to most manufacturers:

If I knew you and you knew me,
 'Tis seldom we would disagree;
 But never having yet clasped hands,
 Both often fail to understand
 That each intends to do what's right,
 And treat each other "honor bright."
 How little to complain there'd be
 If I knew you and you knew me.

Whene'er we ship you by mistake,
 Or in your bill some error make,
 From irritation you'd be free
 If I knew you and you knew me.
 Or when the checks don't come on time,
 And customers send us nary a line,
 We'd wait without anxiety,
 If I knew you and you knew me.

Or when some goods you "fire back,"
 Or make a "kick" on this or that,
 We'd take it in good part, you see,
 If I knew you and you knew me.
 With customers two thousand strong
 Occasionally things go wrong—
 Sometimes our fault, sometimes theirs—
 Forbearance would decrease all cares;
 Kind friend, how pleasant things would be
 If I knew you and you knew me.

Then let no doubting thoughts abide
 Of firm good faith on either side;
 Confidence to each other give,
 Living ourselves, let others live;
 But any time you come this way,
 That you will call we hope and pray;
 Then face to face we each shall see
 And I'll know you and you'll know me.

WANTED: MECHANICAL ENGINEER.

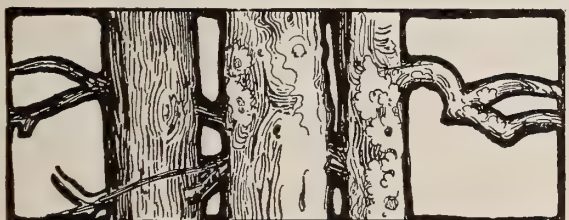
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"METALLIC" ART STEEL PLATES

Many handsome patterns. Easily nailed on over old walls, without carpentry or bother. Paintable, washable, clean and sanitary. Write for illustrated price list.

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TORONTO MONTREAL

BUYERS' GUIDE TO CANADIAN MANUFACTURES

A List of Articles Which Will Enable the Purchaser to Know the Manufacturers of Made-in-Canada Goods. For Rates for Insertion in this Department Write to the Advertising Manager of Industrial Canada, Toronto.

ABRASIVE MATERIALS

- *Canadian Hart Wheels, Ltd., Hamilton, Ont.
- *Dominion Abrasive Wheel Co., New Toronto, Ont.

ACCOUNT BOOKS

- *The Brown Bros., Ltd., Toronto.

ACCOUNTING FORMS

- Business Systems, Ltd., Toronto.

ACETYLENE GAS BUENERS

- Economic Acetylene Burner Co., Toronto.

ACIDS

- *The Grasselli Chemical Co., Ltd., Toronto.
- *The Nichols Chemical Co., Ltd., Montreal.

ADVERTISING NOVELTIES

- Lawson & Jones, Ltd., London, Ont.

ALCOHOL

- Charles Gurd & Co., Ltd., Montreal, Que.

- J. J. McLaughlin, Ltd., Toronto.

AIR WASHERS

- *The Canadian Sirocco Co., Windsor, Ont.

ALCOHOL

- The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.
- *Hiram Walker & Sons, Ltd., Walkerville, Ont.

ALF

- E. L. Drewry, Winnipeg, Man.

ALUMINUM

- *Northern Aluminum Co., Ltd., 1805 Traders Bank, Toronto.

ALUMINUM CASTINGS

- *Tallman Brass & Metal Co., Hamilton, Ont.

AMMONIA

- Canadian Ammonia Co., Ltd., Toronto.

ANGLE BARS

- *The Steel Company of Canada, Limited, Hamilton.

ARCHITECTS

- *T. Pringle & Sons, Montreal.

ASBESTOS:

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEATHING:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEET AND PISTON PACKINGS:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS STEAM PIPE AND BOILER COVERINGS:

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS TEXTILES:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ATHLETIC UNDERWEAR

- Williams, Green & Rome Co., Ltd., Berlin, Ont.

AUTOMOBILES

- *Ford Motor Co., of Canada, Ltd., Walkerville, Ont.
- *Russell Motor Car Co., Ltd., Toronto.

AUTOMOBILE ACCESSORIES,

- *Northern Electric Co., Limited, Montreal.
- *Tallman Brass & Metal Co., Hamilton.

AUTOMOBILE PARTS

- *Dominion Stamping Co., Walkerville, Ont.

AWNING CORD, cotton

- Hamilton Cotton Co., Hamilton, Ont.

AWNINGS

- *Smart-Woods, Ltd., Montreal.

AXLES

- Canada Forge Co., Ltd., Welland, Ont.
- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

AXLES, carriage and automobile

- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

BABBITT METAL

- Alonzo W. Spooner, Limited, Port Hope, Ont.

- *The Canada Metal Co., Toronto.

- *Tallman Brass & Metal Co., Hamilton.

BACON

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BAGS

- *Scythes & Co., Ltd., Toronto.

- *Smart-Woods, Ltd., Montreal.

BAGS, Cotton

- The Canadian Bag Co., Ltd., Montreal, Que.

BAGS, jute

- The Canadian Bag Co., Ltd., Montreal, Que.

- *Scythes & Co., Ltd., Toronto.

BAGS, travelling

- J. Eveleigh & Co., Ltd., Montreal, Que.

- Lamontagne, Ltd., Montreal, Que.

- The M. Langmuir Mfg. Co., of Toronto, Ltd., Toronto.

BAKING JAPAN

- *Berry Bros., Ltd., Winnipeg, Man.

BAND RESAWS:

- *Berlin Machine Works, Ltd., Hamilton.

BANK AND OFFICE RAILINGS

- *The Geo. B. Meadows, Toronto

- Wire, Iron & Brass Works Co., Ltd., Toronto.

- *Canada Wire and Iron Works, Hamilton.

BANK FITTINGS

- The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

BANK RAILINGS AND CAGES:

- *Canada Wire and Iron Goods Co., Hamilton.

- *Dennis Wire & Iron Works Co., London.

BANK SIGNS AND FITTINGS

- *Tallman Brass & Metal Co., Hamilton.

BARB, iron

- London Rolling Mill Co., Ltd., London, Ont.

BARB, steel

- London Rolling Mill Co., Ltd., London, Ont.

BASEBALL GOODS

- A. J. Reach Co., Brantford, Ont.

BATHS, enamelled

- Amherst Foundry Co., Ltd., Amherst, N.S.

BATTERIES, dry

- The Canadian National Carbon Co., Ltd., Toronto.

- Canadian Carbon Company, Ltd., Toronto.

BEARINGS:

- *The Chapman Double Ball Bearing Co., Ltd., Toronto.

- The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS, bronze

- *Tallman Brass & Metal Co., Hamilton, Ont.

- *Dodge Mfg. Co., Ltd., Toronto.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEDS, camp folding

- *Otterville Mfg. Co., Ltd., Otterville, Ont.

- *Smart-Woods, Ltd., Montreal.

BEEF

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BEER

- E. L. Drewry, Winnipeg, Man.

BELTING, chains.

- *Dodge Mfg. Co., Ltd., Toronto.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- *Jeffrey Mfg. Co., Montreal, Que.

BELTING, Elevator

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

BELTING, leather

- The Beardmore Belting Co., Ltd., Toronto.

- *J. L. Goodhue & Co., Danville, P.Q.

- *Sadler & Howarth, Montreal.

- *The D. K. McLaren Belting Co., Ltd., Montreal.

- *The J. C. McLaren Belting Co., Ltd., Montreal.

BELTING, rubber

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

- *Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

- *Gutta Percha & Rubber, Limited.

BENT GOODS

- The Crown Lumber Co., Woodstock, Ont.

BICYCLES AND ACCESSORIES

- *Canada Cycle and Motor Co., Ltd., Toronto.

BILLIARD BALLS

- Samuel May & Co., Toronto.

BINDERS, loose leaf

- Business Systems, Ltd., Toronto.

BISCUITS

- The Montreal Biscuit Co., Montreal, Que.

BLACK SHEETS:

- *A. C. Leslie & Co., Montreal.

BLANK BOOKS:

- Business Systems, Ltd., Toronto.

- *Morton, Phillips & Co., Montreal.

BLANKETS

- Slingsby Mfg. Co., Ltd., Brantford, Ont.

- J. Walsham & Son, Limited, Bolton, Ontario.

BLANKETS, horse

- Slingsby Mfg. Co., Ltd., Brantford, Ont.

- *Smart-Woods, Ltd., Montreal.

- J. Walsham & Son Limited, Bolton, Ont.

BLASTING ACCESSORIES

- Canadian Explosives, Ltd., Montreal, Que.

BLEACHING POWDER

- Canadian Salt Co., Ltd., Windsor, Ont.

BLOWERS:

- *The Canadian Sirocco Co., Windsor, Ont.

- *Sheldons, Ltd., Galt.

BOATS OF ALL KINDS

- Peterboro Canoe Co., Ltd., Peterboro, Ont.

BOILER COMPOUND and OILS

- *Canadian H. W. Johns-Manville Co., Toronto.

- Electric Boiler Compound Co., Ltd., Guelph, Ont.

BOILERS.

- *M. Beatty & Sons, Ltd., Welland, Ont.

- *Goldie & McCulloch Co., Ltd., Galt, Ont.

- John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

- *Polson Iron Works, Ltd., Toronto

- *J. & R. Weir, Montreal, Que.

- Taylor-Forbes Co., Ltd., Guelph, Ont.

- *Jenckes Machine Co., Sherbrooke, Que.

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS, heating:

- *The Goldie & McCulloch Co., Ltd., Galt.

- *Boilers, hot water or steam

- Warden King, Ltd., Montreal, Que.

BOILERS, steam.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- Steel and Radiation Ltd., Toronto.

- Warden King, Ltd., Montreal, Que.

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS AND TANKS

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILER FEED PUMPS.

- *The Bawden Machine Co., Limited, Toronto.

BOILER STANDS

- Anthes Foundry Ltd., Toronto.

BOLSTERS

- *Canadian Car & Foundry Co., Ltd., Montreal, Que.

BOLTS:

- *The National Acme Mfg Co., Montreal.

BOLTS AND NUTS

- *The Canadian Tube & Iron Co., Ltd., Montreal, Que.

- *The Steel Company of Canada, Limited, Hamilton.

- *Starr Mfg. Co., Ltd., Dartmouth, N.S.

BOOKBINDERS

- R. G. McLean, Toronto.

- *The Brown Bros., Ltd., Toronto.

BOOKCASES, sectional (Gunn)

- The George McLagan Furniture Co., Ltd., Stratford, Ont.

BOOKLETS

- Stone Limited, Toronto.

- R. G. McLean, Toronto.

BOOKS, blank

- *The Brown Bros., Ltd., Toronto.

BOOTS AND SHOES.

- Ames-Holden-McCreedy, Ltd., Montreal, Que.

- J. Leckie Co., Ltd.

- The John Ritchie Co., Ltd., Quebec, Que.

BOWLING ALLEYS

- Samuel May & Co., Toronto.

BOXES, cellular board:

- *The Thompson & Norris Co. of Canada, Ltd., Niagara Falls.

BOXES, rattle and soap

- The Arlington Co. of Canada, Ltd., Toronto.

BOXES AND SHOOKS, wooden

- The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

BOXES, wooden

- G. & J. Esplen, Montreal, Que.

- Barchard & Co., Ltd., Toronto.

BRAIDS AND TRIMMINGS

- The Moulton Mfg. Co., Ltd., Montreal.

BRAKE SHOES

- *Canadian Hart Wheels, Ltd., Hamilton, Ont.

BRANDS, burning

- BRASS PLATES**
Geo. Booth & Son, Toronto.
*Tallman Brass & Metal Co., Hamilton.
- BRASS RODS, Sheets and Tubing:**
*Tallman Brass & Metal Co., Hamilton.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.
- BRASS SIGNS AND MEMORIALS**
*Tallman Brass & Metal Co., Hamilton.
- BRASS TUBING, seamless**
Canadian Seamless Wire Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.
- BRASS WIRE**
Canadian Seamless Wire Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.
- BRASS WORK, church.**
Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.
- BRASS WORK, special**
Bawden Machine Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.
*The Watrous Engine Works Co., Ltd., Brantford.
- BRICK**
National Brick Co. of Laprairie, Laprairie, P.Q.
Port Credit Brick Co., Port Credit, Ont.
- BRICK, enamel**
National Brick Co. of Laprairie, Laprairie, P.Q.
- BRICK, pressed**
National Brick Co. of Laprairie, Laprairie, P.Q.
- BRICK, rubbing**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.
- BRICK, sewer**
National Brick Co. of Laprairie, Laprairie, P.Q.
- BRIDGES, Railway and Highway**
Dominion Bridge Co., Montreal.
*Hamilton Bridge Works Co., Ltd., Hamilton.
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*The Structural Steel Co., Ltd., Montreal.
- BRINE PUMPS.**
*The Bawden Machine Co., Limited, Toronto.
- BROOMS**
Simms, T. S., & Co., Ltd., St. John, N.B.
Stevens-Hepner Co., Ltd., Port Elgin, Ont.
*Boeckh Bros Co., Toronto.
- BRUSHES:**
*Boeckh Bros. Co., Toronto.
Simms, T. S., & Co., Ltd., St. John, N.B.
Stevens-Hepner Co., Ltd., Port Elgin, Ont.
- BRUSHES, carbon**
Canadian National Carbon Co., Ltd., Toronto.
- BUCKET TANKS**
*The General Fire Equipment Co., Ltd., Toronto, Ont.
- BUCKLES, shoe and coat**
Parmenter & Bulloch Co., Ltd., Gananoque, Ont.
- BUILDING**
Bathurst Lumber Co., Ltd., Bathurst, N.B.
- BUILDING BLOCKS, vitrified, salt glazed**
Standard Clay Products, Ltd., St. Johns, Que.
- BUILDING FELT and PAPER:**
*Canadian H. W. Johns-Manville Co., Toronto.
*Eureka Mineral Wool & Asbestos Co., Toronto.
*Paterson Manufacturing Company, Toronto and Montreal.
- BUILDING PAPERS**
*Bird & Son, Hamilton, Ont.
- BUILDERS, ship**
*Polson Iron Works, Ltd., Toronto.
J. & R. Weir, Montreal, Que.
- BURLAPS**
The Canadian Bag Co., Ltd., Montreal, Que.
*Scythes & Co., Ltd., Toronto.
*Smart-Woods, Ltd., Montreal.
- BURLAPS, decorative**
Dominion Oil Cloth Co., Ltd., Montreal, Que.
- CABLE, Copper and galvanized:**
*The Steel Co. of Canada, Ltd., Hamilton.
- CABLES, transmission and telephones:**
*Eugene F. Phillips Electrical Works, Ltd., Montreal.
- CABLES, Transmission and Cable:**
*Northern Electric Co., Limited, Montreal.
- CABLES, wire**
The Dominion Wire Rope Co., Ltd., Montreal.
*The B. Greening Wire Co., Ltd., Hamilton.
- CALENDARS, ADVERTISING NOVELTIES, etc.**
Rolph & Clark, Ltd., Toronto.
Lawson & Jones, Ltd., London, Ont.
Stone Limited, Toronto.
- CAMERAS**
Canadian Kodak Co., Ltd., Toronto.
- CAMPERS' OUTFITTERS**
Slingsby Mfg. Co., Ltd., Brantford, Ont.
- CANOEES**
Peterboro Canoe Co., Ltd., Peterboro, Ont.
- CANS, baking powder, etc.**
American Can Co., Montreal and Hamilton.
A. R. Whittall, Montreal.
- CANS, fruit**
American Can Co., Montreal and Hamilton.
A. R. Whittall, Montreal.
- CANS, tin**
A. R. Whittall, Montreal, Que.
American Can Co., Montreal and Hamilton.
- CANS, iron, lead and putty**
A. R. Whittall, Montreal.
- CANVAS**
*Scythes & Co., Ltd., Toronto.
*Smart-Woods, Ltd., Montreal.
- CAPS, cloth**
John W. Peck & Co., Ltd., Montreal, Que.
- CARBIDE**
*Canada Carbide Co., Ltd., Montreal.
- CARBON BRUSHES**
Canadian Carbon Co., Ltd., Toronto.
- CARBON PRODUCTS**
Canadian Carbon Co., Ltd., Toronto.
- CARBONATING MACHINERY**
The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.
- CARBONS, arc light**
Canadian Carbon Co., Ltd., Toronto.
The Canadian National Carbon Co., Ltd.
- CARBONS, flame**
Canadian Carbon Co., Ltd., Toronto.
- CARBONIC ACID GAS**
Canadian Carbonate Company, Limited, Montreal.
- CARBIDE OF CALCIUM**
Canada Carbide Co., Ltd., Montreal, Que.
- CARDBOARD**
Bathurst Lumber Co., Ltd., Bathurst, N.B.
- CARPETS AND RUGS**
Toronto Carpet Mfg. Co., Ltd., Toronto.
- CARPETS AND RUGS, Axminster and ingrain**
Toronto Carpet Mfg. Co., Ltd., Toronto.
- CARPETS AND RUGS, Brussels and Wilton**
Toronto Carpet Mfg. Co., Ltd., Toronto.
- CARPET YARNS, worsted and wool**
Toronto Carpet Mfg. Co., Ltd., Toronto.
- CARRIAGES, baby, etc.**
Canada Furniture Mfrs., Ltd., Woodstock, Ont.
- CARRIERS.**
*Richard-Wilcox Canadian Co., Limited, London, Ont.
- CARRIERS, box and barrel**
Canadian Mathews Gravity Carrier Co., Ltd., Toronto.
- CARRIERS, brick**
Canadian Mathews Gravity Carrier Co., Ltd., Toronto.
*Jeffrey Mfg. Co., Montreal, Que.
*Richards-Wilcox Canadian Co., Ltd., London, Ont.
- CARS**
*Canadian Car & Foundry Co., Ltd., Montreal, Que.
- CARS, industrial:**
*Sheldons, Ltd., Galt.
- CARTONS, lithographed**
Harris Lithographing Co., Toronto.
- CASTINGS:**
*Tallman Brass & Metal Co., Hamilton.
- CASTINGS, aluminum:**
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.
- CASTINGS, brass:**
*Tallman Brass & Metal Co., Hamilton.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.
- CASTINGS, brass and bronze:**
*Tallman Brass & Metal Co., Hamilton.
- CASTINGS, grey iron.**
*Dodge Mfg. Co., Toronto.
*Canadian Car & Foundry Co., Ltd., Montreal, Que.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
*The Record Foundry and Machine Co., Moncton, N.B.
Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.
John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.
The Western Steel & Iron Co., Ltd., Winnipeg, Man.
- CASTINGS, malleable iron:**
*Galt Malleable Iron Co., Ltd., Galt, Ont.
*Pratt & Letchworth Co., Brantford, Ont.
- CASTINGS, steel:**
*Canadian Steel Foundries, Ltd., Montreal.
*Dominion Steel Foundry Co., Ltd., Hamilton, Ont.
Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.
- CATALOGUE MAKERS**
Grip, Ltd., Toronto.
R. G. McLean, Toronto.
- CAUSTIC SODA**
Canadian Salt Co., Ltd., Windsor, Ont.
- CEMENT GUNS**
Steel and Radiation, Ltd., Toronto.
- CHAIRS, assembly hall**
Stratford Mfg. Co., Ltd., Stratford, Ont.
- CHAIRS, folding**
Stratford Mfg. Co., Ltd., Stratford, Ont.
- CHAIRS, rattan and upholstered**
Imperial Rattan Co., Ltd., Stratford, Ont.
- CHEMICALS**
*The Grasselli Chemical Co., Ltd., Toronto.
*The Nichols Chemical Co., Ltd., Montreal.
- CHEMICAL LABORATORY APPARATUS**
The Geo. M. Hendry Co., Ltd., Toronto, Ont.
- CHICLETS AND CHEWING GUM**
Canadian Chewing Gum Co., Ltd., Toronto.
- CIGARS**
Ed. Youngheart & Co., Ltd., Montreal, Que.
- CIGARETTES AND TOBACCO**
Philip Morris & Co., Ltd., Montreal, Que.
- CIRCULAR CUTTERS, solid steel**
The Peter Hay Knife Co., Ltd., Galt, Ont.
- CLAM SHELL BUCKETS**
*M. Beatty & Sons, Ltd., Welland, Ont.
- CLOCKS AND CLOCK MOVEMENTS**
The Arthur Pequegnat Clock Co., Berlin, Ont.
- CLOCKS, TIME**
*International Time Recording Co. of Canada, Ltd., Toronto.
- CLOCKS, WATCHMEN'S**
*The General Fire Equipment Co., Ltd., Toronto, Ont.
- CLOSET SEATS**
*Canadian H. W. Johns-Manville Co., Toronto.
*Goderich Organ Co., Goderich, Ont.
- CLOTHING**
John W. Peck & Co., Ltd., Montreal, Que.
MacKenzie & Co., Ottawa, Canada.
*Smart-Woods, Ltd., Montreal, Que.
- CLOTHING, leather and sheepskin lined coats**
A. R. Clarke & Co., Ltd., Toronto.
- CLOTHING, Mackinaw**
The Carss Mackinaw Clothing Co., Ltd., Orillia, Ont.
- CLOTHES LINES, cotton**
Hamilton Cotton Co., Hamilton, Ont.
- CLUTCHES.**
*Dodge Mfg. Co., Ltd., Toronto.
- CLUTCHES, conveyors.**
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
- COAL**
*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.
Standard Fuel Co., Toronto.
- COBALT OXIDE**
The Coniagas Reduction Co., Ltd., St. Catharines, Ont.
- COCOA AND CHOCOLATE PREPARATIONS**
Walter Baker & Co., of Canada, Ltd., Montreal, Que.
- COFFEE**
S. H. Ewing & Sons, Montreal, Que.
- COFFEE IMPORTERS, Roasters and Manufacturers**
C. H. Cochrane & Co., Ottawa, Ont.
- COLD DRAWN SCREW STEEL:**
*Canadian Drawn Steel Co., Ltd., Hamilton.
*Union Drawn Steel Co., Ltd., Hamilton, Ont.
- COLD DRAWN SHAPES, flats, squares and hexagons:**
*The Canadian Drawn Steel Co., Ltd., Hamilton.
*Union Drawn Steel Co., Ltd., Hamilton, Ont.
- COLD STORAGE DOORS**
John Hillock & Co., Ltd., Toronto.
- COLLAR BUTTONS**
The Arlington Co., of Canada, Ltd., Toronto.
- COLLARS**
The Standard Shirt Co., Ltd., Montreal, Que.
- COLLARS, coated linen**
Parsons & Parsons Canadian Co., Hamilton, Ont.
- COLLARS AND CUFFS waterproof**
Williams, Greene & Rome, Berlin, Ont.
- COLORS**
Brandram-Henderson Ltd., Montreal, Que.
A. Ramsay & Son Co., Montreal, Que.
Sherwin Williams Co. of Canada, Ltd., Montreal, Que.
- COMBS, fine dressing and name**
The Arlington Co. of Canada, Ltd., Toronto.
- COMMERCIAL STATIONERS**
Rolph & Clark, Ltd., Toronto.
- COMMERCIAL STATIONERY:**
*Brown Bros., Ltd., Toronto.
*Morton, Phillips & Co., Montreal.
- CONCENTRATORS:**
*Jenckes Machine Co., Sherbrooke.
- CONCRETE COATINGS, paints, etc.**
The Imperial Varnish & Color Co., Ltd., Toronto.
- CONDUITS FOR INTERIOR WIRING**
*Conduits Company, Ltd., Toronto.
- CONFECTIONERY**
Ganong Bros., Ltd., St. Stephens, N.B.
Moirs, Limited, Halifax, N.S.
The Montreal Biscuit Co., Montreal, Que.
- CONTRACTORS' PLANT**
The Western Steel & Iron Co., Ltd., Winnipeg, Man.
*M. Beatty & Sons, Ltd., Welland, Ont.
- CONVEYORS:**
*Dodge Mfg. Co., Ltd., Toronto.
*Jenckes Machine Co., Sherbrooke.

COOLING APPARATUS

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

COPPER:

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

COPPER SHEETS AND PLATES

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.

COPPERSMITHS

*The Booth-Coulter Copper and Brass Co., Ltd., Toronto.

COPPER TUBING, seamless

*Canadian Seamless Wire Co., Ltd., Toronto.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

COPPERWARE AND LANTERNS
Sheet Metal Products Co. of Canada, Ltd., Toronto.

COPPER WIRE

*Canadian Seamless Wire Co., Ltd., Toronto.

CORKS

S. H. Ewing & Sons, Montreal, Que.

CORK CARPET

*Dominion Oil Cloth Co., Ltd., Montreal, Que.

CORRUGATED BOXES:

*Hinde & Dauch Paper Co., Toronto.
*Martin Corrugated Paper & Box Co., Ltd., Toronto.
*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORRUGATED PAPER:

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORSETS

*Dominion Corset Co., Quebec, Que.

COTTONS

*Dominion Textile Co., Ltd., Montreal.
*Montreal Cottons, Ltd., Valleyfield, P.Q.

COTTONADES

*Hamilton Cotton Co., Hamilton, Ont.

COUPLERS

*Canadian Steel Foundries, Ltd., Welland, Ont.

CRANES

*Northern Crane Works, Walkerville.

COUPLINGS:

*Dodge Mfg. Co., Ltd., Toronto.

CRANKSHAFTS

*Canada Forge Co., Ltd., Welland, Ont.

CREAM CHEESE, Ingersoll

*The Ingersoll Packing Co., Ltd., Ingersoll, Ont.

CREAM SEPARATORS AND MILK CLARIFIERS

*De Laval Dairy Supply Co., Ltd., Montreal, Que.

CREAMERY AND CHEESE FACTORY MACHINERY AND SUPPLIES

*De Laval Dairy Supply Co., Peterboro, Ont.

CREOSOTED MATERIALS:

*The Dominion Creosoting Co., Ltd., Vancouver, B.C.
*Paterson Manufacturing Company, Toronto and Montreal.

CRUSHED STONE

*The Hagersville Contracting Co., Ltd., Hagersville, Ont.

CRUSHING ROLLS:

*Jenckes Machine Co., Sherbrooke.

CUES

*Samuel May & Co., Toronto.

CUPOLAS,

*Sheldons, Ltd., Galt.
*Northern Crane Works, Limited, Walkerville.

CUPS, presentation

*Standard Silver Co., Toronto.

CUPS, grease and oil

*The Canadian Winkley Co., Ltd., Windsor, Ont.

CURLED HAIR

*Delany & Pettit, Ltd., Toronto.

CURTAINS, chenille

*Hamilton Cotton Co., Hamilton, Ont.

CUTLERY

*Standard Silver Co., Toronto.
*Canadian Wm. A. Rogers, Ltd.

DENIMS

*Hamilton Cotton Co., Hamilton, Ont.

DERAILS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

DESIGNERS

*Ontario Engraving Co., Hamilton, Ont.

DESIGNERS and PRINTERS OF BOOKLETS, ETC.

*Grip, Ltd., Toronto.

DINING ROOM SUITES

*The George McLagan Furniture Co., Limited, Stratford, Ont.

DIES

*Butterfield & Co., Rock Island, P.Q.

DISINFECTING APPARATUS

*Sparamotor Co., London, Ont.

DOOR HANGERS

*Richards Wilcox Canadian Co., Ltd., London, Ont.

DRAPEY AND UPHOLSTERY GOODS

*Daly & Morin, Montreal, Que.

DREDGES

*M. Beatty & Sons, Ltd., Welland, Ont.

DRESSING, belt

*Sadler & Haworth, Montreal, Que.

DRESS AND CLOAK TRIMMINGS

*J. Henry Peters Co., 1 Mincing St., Toronto.

DRILLS:

*John Morrow Screw & Nut Co., Ltd., Ingersoll.

DRIFT BOLTS OR SPIKES

*London Rolling Mill Co., Ltd., London, Ont.

DROP FORGINGS:

*Canadian Billings & Spencer, Ltd., Welland.

DRY CELLS, electric

*Canadian Carbon Co., Ltd., Toronto.

DRY COLORS

*P. D. Dods & Co., Ltd., Montreal, Que.

*The Imperial Varnish & Color Co., Ltd., Toronto.

*R. C. Jamieson & Co., Ltd., Montreal, Que.

*Standard Paint & Varnish Co., Ltd., Windsor, Ont.

DRY KILN EQUIPMENT

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

DUMB WAITERS

*Turnbull Elevator Mfg. Co., Toronto.

DURABLE WIRE ROPE

*The Dominion Wire Rope Co., Ltd., Montreal.

DYNAMITE

*Canadian Explosives Ltd., Montreal, Que.

DYNAMOS,

*Consolidated Electric Co., Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*The Canadian Crocker-Wheeler Co., Limited St. Catharines.

DYNAMOS, plating

*Jones & Moore Electric Co., Ltd., Toronto.

EIDERDOWN

*Galt Knitting Co., Ltd., Galt.

ELECTRIC APPLIANCES.

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines.

*Canadian Westinghouse Co., Ltd., Hamilton.

ELECTRICAL COMPOUNDS

*Standard Paint Co. of Canada, Ltd., Montreal, Que.

ELECTRICAL AND GAS FIXTURES

*The Garth Co., Montreal, Que.

*The James Morrison Brass Mfg. Co., Ltd., Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

ELECTRIC LAMPS.

*Packard Electric Co., Ltd., Toronto.

ELECTRIC PLATE WARE

*Roden Bros., Ltd., Toronto.

ELECTRIC BATTERIES

*Canadian Carbon Co., Ltd., Toronto.

ELECTROTYPING

*Central Press Agency, Toronto.

ELECTRICAL SUPPLIES,

*Canadian Westinghouse Co., Ltd., Hamilton.

*Jones & Moore Electric Co., Ltd., Toronto.

*Northern Electric Co., Limited, Montreal.

ELECTRO-SILVER PLATED WARE

*Standard Silver Co., Toronto.

ELEVATORS:

*Jenckes Machine Co., Sherbrooke.

*Turnbull Elevator Mfg. Co., Toronto.

*The Watrous Engine Works Co., Ltd., Brantford.

*Northern Crane Works, Limited, Walkerville.

ELEVATORS FOR ALL PURPOSES

*The Watrous Engine Works Co., Ltd., Brantford.

ELEVATOR GATES AND DOORS

*Turnbull Elevator Mfg. Co., Ltd., Toronto.

ELEVATOR GUARDS

*The Geo. B. Meadows, Toronto

*Iron and Brass Goods Works Co., Ltd., Toronto.

*Canada Wire and Iron Works, Hamilton.

ELEVATORS, hydraulic and electric
John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

EMERY DRESSERS and STANDS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY GRINDERS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEELS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEEL GUARDS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEEL Safety Flanges

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

ENAMELS

*R. C. Jamieson & Co., Ltd., Montreal, Que.

ENAMEL MANUFACTURERS AND DECORATORS

*Standard Paint & Varnish Co., Ltd., Windsor, Ont.

ENAMEL AND TIN WARE

*McClary Mfg. Co., London, Ont.

ENGINES

*E. Leonard & Sons, London.

*The Canadian Sirocco Co., Windsor, Ont.

*Goldie & McCulloch Co., Ltd., Galt, Ont.

*J. & R. Weir, Montreal, Que.

*Polson Iron Works, Ltd., Toronto.

*Sheldons, Ltd., Galt.

*The Watrous Engine Works Co., Ltd., Brantford.

ENGINES, gas and gasoline

*Gold-Shapley-Muir Co., Ltd., Brantford, Ont.

*Massey-Harris Co., Ltd., Toronto.

ENGINES, gasoline tractor

*plowing and threshing

*Sawyer-Massey Co., Ltd., Hamilton, Ont.

ENGINES, hoisting

*M. Beatty & Sons, Welland.

*Watrous Engine Works Co., Ltd., Brantford.

ENGINES, steam plowing and threshing

*Sawyer-Massey Co., Ltd., Hamilton, Ont.

ENGRAVERS

*Grip, Ltd., Toronto.

*Ontario Engraving Co., Hamilton, Ont.

*Rolph & Clark, Ltd., Toronto.

*Stone, Limited, Toronto.

ENGRAVERS, half-tone

*Grip, Ltd., Toronto.

*Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS, wood
Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS AND PRINTERS, steel plate

*American Bank Note Co., Ottawa, Ont.

ENGRAVERS AND PRINTERS, banknote

*American Bank Note Co., Ottawa, Ont.

ENGRAVING:

*J. L. Jones Engraving Co., Toronto.

ENGRAVING, copper and steel

*Pritchard-Andrews Co., of Ottawa, Ltd., Ottawa.

ENSILAGE AND STRAW CUTTERS

*J. Fleury's Sons, Aurora, Ont.

ENVELOPES

*Barber-Ellis Co., Ltd., Toronto.

*Canada Envelope Co., Montreal, Que.

ENVELOPES, Transos,

*Business Systems, Ltd., Toronto.

EXCELSIOR

*Delany and Pettit, Ltd., Toronto, Ont.

EXCELSIOR PADS

*Delany and Pettit, Ltd., Toronto, Ont.

*Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

EXPERTS IN PATENT CAUSES
Ridout & Maybee, Toronto.

EXPLOSIVES, high
Canadian Explosives Ltd., Montreal, Que.

FACE PLATE JAWS

*Ker & Goodwin, Brantford, Ont.

FACTORY SUPPLIES, cheese and creamery

*De Laval Dairy Supply Co., Ltd., Montreal, Que.

*J. Henry Peters Co., 1 Mincing St., Toronto.

FANS:

*The Canadian Sirocco Co., Windsor, Ont.

*Sheldons, Ltd., Galt.

FASTENERS, belt

*Sadler & Haworth, Montreal, Que.

FENCES and GATES:

*Dennis Wire & Iron Works Co., London.

*Canada Wire and Iron Works, Hamilton.

FENCING AND GATES, woven wire

*Banwell Hoxie Wire Fence Co., Hamilton, Ont.

*Canada Wire and Iron Goods Co., Hamilton.

FENCING, wire

*The Great West Wire Fence Co., Ltd., Winnipeg, Man.

*C. H. Johnson & Sons, Ltd., Montreal, Que.

FIBRE FAILS:

*The E. B. Eddy Co., Ltd., Hull.

FILES

*Henry Disston & Sons, Ltd., Toronto.

*The Nicholson File Co., Port Hope, Ont.

FIRE ALARMS,

*Northern Electric Co., Limited, Montreal.

FIRE DOOR HARDWARE

*Richards Wilcox Canadian Co., Ltd., London, Ont.

FIRE ENGINES:

*Watrous Engine Works Co., Ltd., Brantford.

FIRE ESCAPES:

*Canada Wire and Iron Goods Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

FIRE EXTINGUISHERS

*The Booth-Coulter Copper and Brass Co., Ltd., Montreal, Que.

*Canadian H. W. Johns-Manville Co., Toronto.

*The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE FIGHTING APPARATUS

*Watrous Engine Works Co., Ltd., Brantford.

FIRE HOSE

*Canadian Consolidated Rubber Co., of Canada, Ltd., Montreal, Que.

*Dunlop Tire and Rubber Goods Co., Limited, Toronto.

*Gutta Percha & Rubber, Ltd.

FIRE PREVENTION MATERIAL.

*Chicago Bridge & Iron Works, Bridgeburg, Ont.

*Eureka Mineral Wool & Asbestos Co., Toronto.

*The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE-PROOF WINDOWS AND DOORS

*Pedlar People Ltd., Oshawa, Ont.

FIRE SPRINKLER SYSTEMS.

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- *The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE AND WATER DEPARTMENT SUPPLIES.

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- The Garth Co., Montreal, Que.

FISH, Atlantic Sea-Foods
Maritime Fish Corporation Ltd., Montreal.**FITTINGS FOR SOIL PIPE**
Anthes Foundry, Ltd., Toronto.**FITTINGS, steam**
Warden King, Ltd., Montreal, Que.**FLAGS**
*Scythes & Co., Ltd., Toronto.
*Smart-Woods, Ltd., Montreal.**FLASHLIGHTS**
Canadian Carbon Co., Toronto.**FLOORING, hardwood**
Seaman Kent Co., Ltd., Meaford, Ont.**FLUE LINERS**
Standard Clay Products, Ltd., St. Johns, Que.**FORGES:**
*Sheldons, Ltd., Galt.**FORGINGS**
Canada Forge Co., Ltd., Welland, Ont.
*The Steel Co. of Canada, Ltd., Hamilton.**FORGINGS, DROP**
*Dominion Stamping Co., Walkerville, Ont.**FOUNDRY EQUIPMENT**
Northern Crane Works, Limited, Walkerville.**FOUNTAIN FRUITS and Juices**
J. J. McLaughlin, Ltd., Toronto.**FRICTION CLUTCH PULLEYS:**
*Dodge Mfg. Co., Ltd., Toronto.**FROGS AND CROSSINGS, manganese**
Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.**FUEL**
Standard Fuel Co., Toronto.**FUR GARMENTS, men's and women's**
Holt, Renfrew, Ltd., Quebec.**FUR GOODS**
John W. Peck & Co., Ltd., Montreal, Que.**FUR TRIMMINGS, ornaments and buttons**
J. Henry Peters Co., 1 Mincing St., Toronto.**FURNACES**
Gurney Foundry Co., Ltd., Toronto.
McClary Mfg. Co., London, Ont.
The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.**FURNACES, hot air**
Bedford Stove Co., Bedford, Que.**FURNITURE, hall**
The George McLagan Furniture Co., Ltd., Stratford, Ont.**FURNITURE, house and office**
Canada Furniture Mfrs., Ltd., Woodstock, Ont.**FURNITURE, office**
The Canadian Office and School Furniture Co., Ltd., Preston, Ont.**FURNITURE, reed and rattan**
Imperial Rattan Co., Ltd., Stratford, Ont.**GALVANIZED IRON:**
*A. C. Leslie & Co., Montreal.**GALVANIZERS**
Acme Stamping & Tool Works Ltd., Hamilton, Ont.
*Ontario Wind Engine and Pump Co., Ltd., Toronto.**GASOLINE ENGINES**
*Ontario Wind & Pump Co., Ltd., Toronto.
De Laval Dairy Supply Co., Ltd., Peterboro, Ont.**GASOLINE FIRE ENGINES**
*The Watrous Engine Works Co., Ltd., Brantford.**GASOLINE MOTORS, "Imperial" Marine**
Bruce Stewart & Co., Ltd., Charlottetown, P.E.I.**GASOLINE STORAGE SYSTEMS, special underground**
S. F. Bowser & Co., Toronto.**GASOLINE**

- *The Imperial Oil Co., Ltd., Toronto.

GEARS, CUT
Hamilton Gear & Machine, Toronto.**GENERATORS:**
*Canadian Crocker-Wheeler Co., Ltd., St. Catharines.
*Canadian Westinghouse Co., Ltd., Hamilton.**GINS**
The Melchers Gin & Spirits Distillery Co., Ltd., Montreal, Que.**GLASSWARE**
Dominion Glass Co., Ltd., Montreal, Que.**GLASSWARE, cut**
Roden Bros., Ltd., Toronto.**GLASS FOR BUILDINGS**
Toronto Plate Glass Importing Co., Ltd., Toronto.**GLASS BENDERS**
Toronto Plate Glass Importing Co., Ltd., Toronto.**GLASS, mirror**
Toronto Plate Glass Importing Co., Ltd., Toronto.**GLOVES AND MITTS**
A. R. Clarke & Co., Ltd., Toronto.
Craig, Cowan Co., Limited, Toronto.**GLUE**
Delany and Pettit, Ltd., Toronto, Ont.**GOLD FILLED WIRE AND PLATE**
Canadian Seamless Wire Co., Toronto.**GOLD AND SILVER REFINERS**
Canadian Seamless Wire Co., Toronto.**GRAIN CRUSHERS (Rapid Easy)**
J. Fleury's Sons, Aurora, Ont.**GRAPE JUICE**
J. J. McLaughlin, Ltd., Toronto.**GRATES.**
*The Goldie & McCulloch Co., Ltd., Galt, Ont.**GRAVITY CARRIERS**
Canadian Mathews Gravity Carrier Co., Ltd., Toronto.**GRILLES, metal**
*Canada Wire & Iron Goods Co., Hamilton.
*Dennis Wire & Iron Works Co., London.**GRINDERS, Pedestal and Bench.**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.**GRINDING and Polishing Machinery**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.**GRINDING WHEELS:**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.
*The Dominion Abrasive Wheel Co., Ltd., New Toronto.**GRINDSTONES**
*Richards Wilcox Canadian Co., Ltd., London, Ont.**GUNN SECTIONAL BOOKCASES**
The Geo. McLagan Furniture Co., Limited, Stratford, Ont.**GUY ANCHORS**
B. J. Coghlin Co., Ltd., Montreal.**GYPSUM, crushed**
*Albert Mfg. Co., Hillsborough, N.B.**GYPSUM PRODUCTS**
*Manitoba Gypsum Co., Ltd., Winnipeg, Man.
De Laval Dairy Supply Co., Ltd., Peterboro, Ont.**HALL FURNITURE**
The Geo. McLagan Furniture Co., Ltd., Stratford, Ont.**HAMS**
F. W. Fearman Co., Ltd., Hamilton, Ont.**HANGERS.**
*Dodge Mfg. Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.**HARDWARE**
*Richards Wilcox Canadian Co., Ltd., London, Ont.
Taylor-Forbes Co., Ltd., Guelph, Ont.
The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.**HARDWOOD FLOORING**
Wilson Bros. Ltd., Collingwood, Ont.**HARDWOOD INTERIOR FINISH**
Wilson Bros., Ltd., Collingwood, Ont.**HARDWOOD VENEER DOORS TO DETAIL**
Wilson Bros., Ltd., Collingwood, Ont.**HARNESSES**
Lamontagne Ltd., Montreal, Que.**HATS, men's straw**
The Crown's Hat Co., Ltd., Galt, Ont.**HATS, ladies' and children's straw**
The Crown Hat Co., Ltd., Galt, Ont.**HATS, ladies' and children's felt and beaver**
The Crown Hat Co., Ltd., Galt, Ont.**HATS, ladies' felt and straw**
Toronto Hat Mfg. Co., Toronto.**HAULAGE, Wire Rope**
The Dominion Wire Rope Co., Ltd., Montreal.**HEATERS**
*The Canadian Sirocco Co., Windsor, Ont.
*Watrous Engine Works Co., Ltd., Brantford.**HEATERS, feed water:**
*The Goldie & McCulloch Co., Ltd., Galt.**HEATING APPLIANCES:**
*Sheldons, Ltd., Galt.**HEATING SYSTEMS**
Gurney Foundry Co., Ltd., Toronto.**HESSIANS**
The Canadian Bag Co., Ltd., Montreal, Que.**HINGES:**
*Scythes & Co., Ltd., Toronto.
*Smart-Woods, Ltd., Montreal.**HOISTS:**
*The Steel Co. of Canada, Ltd., Hamilton.**HOISTS**
*M. Beatty & Sons, Ltd., Welland, Ont.**HOISTS, electric and pneumatic.**
*M. Beatty & Sons, Ltd., Welland, Ont.**HOISTS, electric and pneumatic.**
Northern Crane Works, Limited, Walkerville.**HOISTS, electric and pneumatic.**
*M. Beatty & Sons, Ltd., Welland, Ont.**HOISTS, electric and pneumatic.**
Northern Crane Works, Limited, Walkerville.**HOISTS, electric and pneumatic.**
*M. Beatty & Sons, Ltd., Welland, Ont.**HOISTS, electric and pneumatic.**
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Northern Crane Works, Limited, Walkerville.**HOISTS, electric and pneumatic.**
*M. Beatty & Sons, Ltd., Welland, Ont.**HOISTS, electric and pneumatic.**
Northern Crane Works, Limited, Walkerville.**HOISTS, electric and pneumatic.**
*M. Beatty & Sons, Ltd., Welland, Ont.**INVERTS**
Standard Clay Products, Ltd., St. Johns, Que.**IRON:**
*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.**IRON AND STEEL BARS**
*The Steel Company of Canada, Limited, Hamilton.**IRON, refined bar**
Starr Mfg. Co., Ltd., Dartmouth, N.S.**IRON PUMPS.**
*The Bawden Machine Co., Limited, Toronto.**IRON STAIRWAYS:**
*Canada Wire & Iron Goods Co., Hamilton.
*Dennis Wire & Iron Works Co., London.**IRONWORK, architectural**
*Canada Wire & Iron Goods Co., Hamilton.**IRONWORK, ornamental**
*Canada Wire & Iron Goods Co., Hamilton.**IRON, LEAD AND PUTTY**
A. R. Whittall, Montreal.**JAM, canned goods, etc.**
E. D. Smith & Son, Limited.**JAPANS, enamels, etc.**
A. Muirhead Co., Ltd., Toronto.**JOINTERS:**
*Berlin Machine Works, Ltd., Hamilton.**JELLY POWDER**
S. H. Ewing & Sons, Montreal, Que.**JEWELRY, enamelled souvenir**
Caron Bros., Montreal, Que.**JEWELRY, gold filled**
Caron Bros., Montreal, Que.**JOIST HANGERS**
*Richards-Wilcox Canadian Co., Ltd., London, Ont.**KELSEY WARM AIR GENERATOR**
The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.**KILNS:**
*Sheldons, Ltd., Galt.**KINDLING**
Standard Fuel Co., Toronto.**KNIFE GRINDERS:**
*W. H. Banfield & Sons, Toronto.**KNITTED GOODS:**
*Penman's, Ltd., Paris, Ont.**KNIVES**
Henry Disston and Sons, Toronto, Ont.**KNIVES**
The Peter Hay Knife Co., Ltd., Galt, Ont.**KNIVES**
Simonds Canada Saw Co., Ltd., Montreal, Que.**KNIVES, pulp and paper**
Henry Disston and Sons, Toronto, Ont.**KNIVES**
The Peter Hay Knife Co., Ltd., Galt, Ont.**KODAKS AND PHOTOGRAPHIC SUPPLIES**
Canadian Kodak Co., Ltd., Toronto.**LABELS**
Lawson & Jones Ltd., London, Ont.**LABELS, lithographed**
Harris Lithographing Co., Toronto.**LACE LEATHER**
F. C. McCordick, St. Catharines, Ont.**LADDER, step**
*The D. K. McLaren Belting Co., Ltd., Montreal.**LADDER, step**
*The J. C. McLaren Belting Co., Ltd., Montreal.**LADDER, step**
Stratford Mfg. Co., Ltd., Stratford, Ont.**LADDER, step**
*Otterville Mfg. Co., Ltd., Otterville, Ont.**LADDER, step**
Northern Crane Works, Limited, Walkerville.**LADDER, step**
E. L. Drewry, Winnipeg, Man.

LARD

F. W. Fearman Co., Ltd., Hamilton, Ont.

LATH

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

LATHE CHUCKS

Ker & Goodwin, Brantford, Ont.

LATHE-DOGS:

Canadian Billings & Spencer Ltd., Welland.

LAUNCHES

Peterboro Canoe Co., Ltd., Peterboro, Ont.

LAWN MOWERS

Taylor-Forbes Co., Ltd., Guelph, Ont.

LAWN SWINGS

Stratford Mfg. Co., Ltd., Stratford, Ont.

LAVATORIES, enameled

Amherst Foundry Co., Ltd., Amherst, N.S.

LAUNDRY SINKS

Amherst Foundry Co., Ltd., Amherst, N.S.

LEAD

*The Consolidated Mining and Smelting Co. of Canada, Ltd., Trail, B.C.

LEAD GRINDERS

Benjamin Moore & Co., Ltd., Toronto.

LEAD SHEET

Toronto Plate Glass Importing Co., Ltd., Toronto.

LEAD PIPE

*The Steel Co. of Canada, Ltd., Hamilton
Toronto Plate Glass Importing Co., Ltd., Toronto.
*The Canada Metal Co., Toronto.

LEATHER

The Robson Leather Co., Ltd., Oshawa.

LEATHER, bookbinders'

Clarke & Clarke, Ltd., Toronto.

LEATHER, fancy

Clarke & Clarke, Ltd., Toronto.

LEATHER GOODS

Lamontagne, Ltd., Montreal, Que.

LEATHER, hemlock sole

The Breithaupt Leather Co., Ltd., Berlin, Ont.

LEATHER, patent colt and side leather

A. R. Clarke & Co., Ltd., Toronto.

LEATHER, sheep skin, etc.

Clarke & Clarke, Ltd., Toronto.

LEATHER, upholstering.

Clarke & Clarke, Limited, Toronto.

LEATHER, upper

A. Davis & Son, Ltd., Kingston, Ont.

LINK BELTING.

*The Dodge Mfg. Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.

LINOLEUM

Dominion Oil Cloth Co., Ltd., Montreal, Que.

LITHOGRAPHED BUSINESS STATIONERY

Business Systems, Ltd., Toronto.

LITHOGRAPHED TIN WARE:

*MacDonald Mfg. Co., Ltd., Toronto.

LITHOGRAPHERS

American Bank Note Company, Ottawa, Ont.

Harris Lithographing Co., Toronto.

*Montreal Lithographing Co., Montreal.

Stone, Limited Toronto.

Rolph & Clark Ltd., Toronto.

LOCKERS:

*Canada Wire & Iron Works Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

*Geo. B. Meadows, Wire, Iron and Brass Wks. Co., Toronto.

LOCOMOTIVE BLOCKS

Standard Clay Products, Ltd., St. Johns, Que.

LOCOMOTIVES, industrial

*Montreal Locomotive Works, Ltd., Montreal.

LOCOMOTIVE & MARINE BRASS WORKS

The James Morrison Brass Mfg. Co., Ltd., Toronto.

LOOSE LEAF, BINDERS AND FORMS

Business Systems, Ltd., Toronto.

LOOSE LEAF SYSTEMS

Copeland-Chatterson Co., Ltd., Toronto.

LOOSE LEAF SUPPLIES

The Esdale Press, Ltd., Edmonton.

LUBRICATORS, steam sight feed

Penberthy Injector Co., Ltd., Windsor, Ont.

LUGS, for silos and water tanks

*Otterville Mfg. Co., Ltd., Otterville, Ont.

LUMBER

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.
G. & J. Esplen, Montreal, Que.

LUMBER, asbestos:

*Canadian H. W. Johns-Manville Co., Toronto.
*Eureka Mineral Wool & Asbestos Co., Toronto.

LUMBERING BLANKETS.

Slingsby Mfg. Co., Ltd., Brantford, Ont.

LUMBER, red pine and spruce

Gillies Bros., Ltd., Braeside, Ont.

LUMBER, spruce, fir, larch and cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

LUMBER, white pine

Gillies Bros., Ltd., Braeside, Ont.

MACHINE TOOLS

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, brick:

*The Canadian Sirocco Co., Ltd., Windsor, Ont.
*Sheldons, Ltd., Galt.

MACHINERY, conveying.

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*The Jeffrey Mfg. Co., Montreal.

MACHINERY, elevating.

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*The Jeffrey Mfg. Co., Montreal.

MACHINERY, flour mill:

*The Goldie & McCulloch Co., Ltd., Galt.

MACHINERY, grinding

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

MACHINERY, hoisting, etc.

*The Jeffrey Mfg. Co., Montreal.

*Polson Iron Works, Ltd., Toronto.

J. & R. Weir, Montreal, Que.

*M. Beatty & Sons, Ltd., Welland, Ont.

Northern Crane Works, Limited, Walkerville.

MACHINERY, ice cream

J. J. McLaughlin, Ltd., Toronto.

MACHINERY, iron working

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, pulp mill

*The Watrous Engine Works Co., Ltd., Brantford.

MACHINERY, pumping

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

*The Watrous Engine Works Co., Ltd., Brantford.

MACHINERY, punching and shearing

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, railroad and car shop

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, roadmaking

Sawyer-Massey Co., Ltd., Hamilton, Ont.

*Watrous Engine Works Co., Ltd., Brantford.

MACHINERY, sawmill

The E. Long Mfg. Co., Ltd., Orillia, Ont.

P. Payette & Co., Penetanguishene, Ont.

W. P. Plant, Hastings, Ont.

*Watrous Engine Works Co., Ltd., Brantford.

MACHINERY, special

Bawden Machine Co., Ltd., Toronto.

MACHINERY, tannery

W. P. Plant, Hastings, Ont.

MACHINERY, transmission

*Dodge Mfg. Co., Ltd., Toronto.

*Goldie & McCulloch Co., Ltd., Galt, Ont.

MACHINERY, wood working

*Berlin Machine Works, Ltd., Hamilton.

*The Watrous Engine Works Co., Ltd., Brantford.

MACHINE WRENCHES:

*Canadian Billings & Spencer, Ltd., Welland.

MACHINES, painting

Spramotor Co., London, Ont.

MAGNESITE

Canadian Carbonate Co., Ltd., Montreal, Que.

MAILING TUBES:

*Dominion Paper Box Co., Ltd., Toronto.

MALT:

*Hiram Walker & Sons, Ltd., Walkerville.

MAPS AND MAP MOUNTING

The Geo. M. Hendry Co., Ltd., Toronto.

Stone, Limited, Toronto.

MARTINGALE RINGS AND SLIDE LOOPS

The Arlington Co. of Canada, Ltd., Toronto.

MATCHERS:

*Berlin Machine Works, Ltd., Hamilton.

MATCHES:

*The E. B. Eddy Co., Ltd., Hull.

MEATS, canned

The Wm. Davies Co., Ltd., Toronto.

MECHANICAL DRAUGHT

*Canadian Sirocco Co., Windsor, Ont.

MECHANICAL STOKERS,

*The Jones Underfeed Stoker Co., Ltd., Toronto.

MEDICINES, patented and pharmaceutical

Dr. Ed. Morin & Cie., Ltd., Quebec.

METAL, babbitt

*Canada Metal Co., Toronto.

*Tallman Brass & Metal Co., Hamilton.

Alonzo W. Spooner, Limited, Port Hope, Ont.

METAL CEILING:

*Metallic Roofing Co., Ltd., Toronto.

*Metal Shingle & Siding Co., Ltd., Preston.

*Pedlar People, Ltd., Oshawa, Ont.

METAL PACKING

*Garlock Packing Company, Hamilton.

METAL ROOFING

*Pedlar People Ltd., Oshawa, Ont.

METAL, spinning and stamping

The Booth-Coulter Copper and Brass Co., Ltd., Toronto.

METAL SHINGLES:

*Metal Shingle & Siding Co., Ltd., Preston.

*The Metallic Roofing Co. of Canada, Ltd., Toronto, Ont.

*Pedlar People, Ltd., Oshawa, Ont.

METAL SIDING:

*Metallic Roofing Co., Ltd., Toronto.

*Metal Shingle & Siding Co., Ltd., Preston.

*Pedlar People, Ltd., Oshawa, Ont.

MILK BOTTLE CAPS

Business Systems, Ltd., Toronto.

MILK DEALERS' MACHINERY AND SUPPLIES

De Laval Dairy Supply Co., Ltd., Montreal, Que.

MILLBOARD, asbestos:

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

MILLING CUTTERS

Pratt and Whitney Company of Canada, Dundas, Ont.

MITTS AND GLOVES (Indian tan, red deerskins)

Holt, Renfrew Ltd., Quebec, Que.

A. R. Clarke & Co., Ltd., Toronto.

MOCCASINS AND SLIPPERS (Indian tanned leathers)

Holt, Renfrew, Ltd., Quebec, Que.

MORTISERS:

*Berlin Machine Works, Ltd., Hamilton.

MOTOR CAR PARTS AND ACCESSORIES

*Russell Motor Car Co., Ltd., Toronto.

MOTORS:

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines.

*Canadian Westinghouse Co., Ltd., Hamilton.

MOTORS, D.C.

*Canadian Crocker Wheeler Co., St. Catharines, Ont.

MOTORS, electric (alternating current)

*Canadian Westinghouse Co., Ltd., Hamilton.

Consolidated Electric Co., Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*The Canadian Crocker-Wheeler Co., Limited St. Catharines.

MOTORS, electric (direct current)

*Canadian Westinghouse Co., Ltd., Hamilton.

Consolidated Electric Co., Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

MOTORS, electric (repairing)

Consolidated Electric Co., Ltd., Toronto.

MOTOR TRUCKS:

*The Gram Motor Truck Co., Ltd., Walkerville.

MOULDERS:

*Berlin Machine Works, Ltd., Hamilton.

NAILS

*The Steel Company of Canada, Limited, Hamilton.

NAILS, copper

Parmenter and Bulloch Co., Ltd., Gananoque, Ont.

NAILS, wire

Parmenter and Bulloch Co., Ltd., Gananoque, Ont.

The Graham Nail Works, Toronto.

NAPHTHA

*The Imperial Oil Co., Ltd., Toronto.

NICKEL OXIDE

Coniagas Reduction Co., Ltd., St. Catharines, Ont.

NUTS

*John Morrow Screw & Nut Co., Ltd., Ingersoll.

*The National Acme Mfg. Co., Montreal.

*The Steel Company of Canada, Limited, Hamilton.

OAKUM, plumbers', Canadian Navy

Factory Waste and Metal Co., Montreal, Que.

*Scythes & Co., Ltd., Toronto.

OAT CRUSHERS AND FLAKERS

J. Fleury's Sons, Aurora, Ont.

OFFICE STATIONERY:

*The Montreal Lithographing Co., Ltd., Montreal.

OILS

Brandram-Henderson, Ltd., Montreal, Que.
A. Ramsay & Son Co., Montreal, Que.
Sherwin-Williams Co. of Canada, Ltd., Montreal, Que.

OIL FILTRATION AND CIRCULATING SYSTEMS

S. F. Bowser & Co., Toronto.

OILERS AND OIL STOVES

Sheet Metal Products Co. of Canada, Ltd., Toronto.

OIL STORAGE SYSTEMS, self measuring

S. F. Bowser & Co., Toronto.

OIL COMPANIES

Commercial Oil Co., Ltd., Hamilton, Ont.

OILS (Petroleum products)

*British American Oil Co., Ltd., Toronto.

OILS, Petroleum

*The Imperial Oil Co., Ltd., Toronto.

OILS, road

*Paterson Manufacturing Company, Toronto and Montreal.

OILCLOTHS, floor and table

Dominion Oil Cloth Co., Ltd., Montreal, Que.

OFFICE DESKS

*Goderich Organ Co., Goderich, Ont.

ORGANS

*Goderich Organ Co., Goderich, Ont.
Thomas Organ & Piano Co., Woodstock, Ont.

ORGANS, pipe

Casavant Freres, St. Hyacinthe, Que.

ORGANS, parlour

Goderich Organ Co., Goderich.

ORNAMENTAL IRON WORK:

*Canada Wire & Iron Goods Co., Hamilton.
*Dennis Wire & Iron Works Co., London.
*The Geo. B. Meadows, Toronto Iron and Brass Goods Works, Co., Ltd., Toronto.

OVEN, portable bake

Bedford Stove Co., Bedford, Que.

OVERALLS

Mackenzie & Co., Ottawa, Ont.
Peerless Overall Co., Rock Island, Que.
Walker Pant and Shirt Co., Walkerville and Chatham, Ont.
The Standard Shirt Co., Ltd., Montreal, Que.

OVERCOATINGS

Rosamond Woollen Co., Aumont, Ont.

OVERHEAD RUNWAYS.

*Richard-Wilcox Canadian Co., Limited, London, Ont.

OXYGEN

*Lever Brothers, Limited, Toronto.

PACKING BOXES

Barchard & Co., Ltd., Toronto.

PACKING, engine:

*Garlock Packing Co., Hamilton.

PACKING, rubber

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.
Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
*Gutta Percha & Rubber, Ltd.
Jenkins Bros., Ltd., Montreal, Que.

PAIS AND TUBS, wooden

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

PAINTERS' SUPPLIES

A. Muirhead Co., Ltd., Toronto.

PAINTS

R. C. Jamieson & Co., Ltd., Montreal, Que.

PAINTS and VARNISHES:

A. Muirhead Co., Ltd., Toronto.
Benjamin Moore & Co., Ltd., Toronto.
Standard Paint & Varnish Co., Ltd., Windsor, Ont.
The Imperial Varnish & Color Co., Ltd., Toronto.
The Staneland Co., Ltd., Victoria, B.C.
A. Ramsay & Sons Co., Montreal, Que.
Sherwin-Williams Co. of Canada, Ltd., Montreal, Que.
*Ault & Wiborg Co. of Canada, Toronto.
*The Dougall Varnish Co., Ltd., Montreal.
Standard Paint Co. of Canada, Ltd., Montreal.

PAINTS, barn and bridge

Standard Paint and Varnish Co., Ltd., Windsor, Ont.
The Sherwin-Williams Co. of Canada, Ltd., Montreal.

PAINTS, Preservative

Standard Paint Co. of Canada, Ltd., Montreal, Que.
*Paterson Manufacturing Company, Toronto and Montreal.

PAPER BOARDS

Bathurst Lumber Co., Ltd., Bathurst, N.B.

PAPER, book

Barber Paper & Coating Mills, Ltd., Georgetown, Ont.

PAPER BOXES

King Paper Box Co., Ltd., Montreal, Que.

*Rudd Paper Box Co., Ltd., Toronto.

PAPERS, bond

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, envelope

Provincial Paper Mills Ltd., Georgetown, Ont.
The Toronto Paper Mfg. Co., Cornwall, Ont.

PAPER, KRAFT, wrapping printing and waterproof

*Beveridge Paper Co., Ltd., Montreal, Que.

PAPER, news

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPER, wrapping

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPERS, building

Bathurst Lumber Co., Ltd., Bathurst, N.B.

*The Riordon Pulp and Paper Co., Montreal, Que.

Standard Paint Co. of Canada, Ltd., Montreal.

PAPER, coated, book and label

*Ritchie & Ramsay, Ltd., Toronto
Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, coated cover

*Ritchie & Ramsay, Ltd., Toronto.
Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, coated box board

*Ritchie & Ramsay, Ltd., Toronto.
Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, enamelled blotting

*Ritchie & Ramsay, Ltd., Toronto
Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, gummed tapes

Gummed Papers, Ltd., Brampton, Ont.

PAPER, label

Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, ledger

*Rolland Paper Co., Ltd., Montreal, Que.

The Toronto Paper Mfg. Co., Cornwall, Ont.

The Toronto Paper Mfg. Co., Cornwall, Ont.

PAPER, wall

Stauntons, Ltd., Toronto.

PAPER, writing

The Toronto Paper Mfg. Co., Cornwall, Ont.

PAPER, writing, high-grade

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, writing, superfine

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER BOXES:

*Dominion Paper Box Co., Toronto.

PARK SEATS

Stratford Mfg. Co., Ltd., Stratford, Ont.

PARLOR SUNDRIES

The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

PATENTS

Fetherstonhaugh & Co., Toronto.
Ridout and Maybee, Toronto.

PATENT LITIGATION

Ridout and Maybee, Toronto.

PAY ROLL AUDITS

*International Time Recording Co. of Canada, Ltd., Toronto.

PEAS AND BEANS FOR SEED

W. P. Niles, Ltd., Wellington, Ont.

PERFORATED METALS:

*Canada Wire & Iron Goods Co., Hamilton.

PERFORATED MUSIC ROLLS

The Otto Higel Co., Limited, Toronto.

PERFUMES AND TOILET PREPARATIONS

Sovereign Perfumes Ltd., Toronto.

PETROLEUM PRODUCTS

*The Imperial Oil Co., Ltd., Toronto.

PHOTOMAILERS

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

PIANOS

Dominion Organ & Piano Co., Ltd., Bowmanville, Ont.

*Gourlay, Winter and Leeming, Toronto.

PIANO ACTIONS

The Otto Higel Co., Ltd., Toronto.

PIANO KEYS

The Otto Higel Co., Ltd., Toronto.

PIANOS, player

*Gourlay, Winter & Leeming, Toronto.

PIANO, player actions

The Otto Higel Co., Ltd., Toronto.

PIANO STOOLS and BENCHES

*Goderich Organ Co., Goderich, Ont.

PICKLES:

The Wm. Davies Co., Ltd., Toronto.

PICKLES AND CATSUPS:

T. A. Lytle Co., Ltd., Toronto.

PIG IRON

*The Steel Company of Canada, Limited, Hamilton.

PINE DOORS, SASH, MOULDINGS ETC.

Wilson Bros., Ltd., Collingwood, Ont.

PINS, society, emblems and Badges.

Caron Bros., Montreal, Quebec.

PIPE, cast iron, for water and gas.

National Iron Works, Ltd., Toronto.

PIPE COUPLINGS:

*The Steel Co. of Canada, Ltd., Hamilton.

PIPE COVERINGS:

*Eureka Mineral Wood & Asbestos Co., Toronto.

PIPES, culvert

Standard Clay Products, Ltd., St. Johns, Que.

PIPE AND NIPPLES, black and galvanized

*Canadian Tube & Iron Co., Ltd., Montreal, Que.

PIPE, sewer.

Hamilton and Toronto Sewer Pipe Co., Ltd., Hamilton, Ont.

Standard Clay Products, Ltd., St. Johns, Que.

PIPE, soil and fittings

Warden King Ltd., Montreal, Que.

PIPE AND TUBES, wrought merchant

*Page-Hersey Iron, Tube and Lead Co., Ltd., Toronto.

PIPE, Threading and Cutting off Machines

John H. Hall & Sons, Limited, Brantford, Ont.

PISTON RODS

*The Canadian Drawn Steel Co., Ltd., Hamilton.
*Union Drawn Steel Co., Ltd., Hamilton, Ont.

PLANERS:

*Berlin Machine Works, Ltd., Hamilton.

PLANING MILLS

G. & J. Esplen, Montreal, Que.

PLASTER OF PARIS

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, hard wall

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, land

*Albert Mfg. Co., Hillsborough, N.B.

PLAYING CARDS:

*The Montreal Lithographing Co., Ltd., Montreal.

PLOWS

J. Fleury's Sons, Aurora, Ont.

PLUMBERS' SUPPLIES

The Garth Co., Montreal, Que.
The James Morrison Brass Mfg. Co., Ltd., Toronto.

PLUMBING APPLIANCES:

Standard Sanitary Mfg. Co., Ltd., Toronto.

PLUMBING SUPPLIES

Toronto Plate Glass Importing Co., Ltd., Toronto.

POLES, curtain

Daly & Morin, Montreal, Que.

POLES, telegraph and telephone, cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

PORK PACKERS AND CHEESE EXPORTERS

The Ingersoll Packing Co., Ltd., Ingersoll, Ont.

POSTS, split cedar fence

Fernie Lumber Co., Ltd., Fernie, B.C.

POSTERS

Stone, Limited, Toronto.

POULTRY SUPPLIES AND MEDICINES

Lee Mfg. Co., Ltd., Pembroke, Ont.

POWDER, blasting

Canadian Explosives, Ltd., Montreal, Que.

POWER PRESSES:

*Canadian Boomer & Boschert Press Co., Ltd., Montreal.

PRESSES, baling

William R. Perrin & Co., Ltd., Toronto.

PRESSES, Filter

William R. Perrin & Co., Ltd., Toronto.

PRESSES, Hydraulic

*Canadian Boomer & Boschert Press Co., Ltd., Montreal.

PRESSES, Veneer

William R. Perrin & Co., Ltd., Toronto.

PRINTED BUSINESS STATIONERY

Business Systems, Ltd., Toronto.

PRINTERS

Rous & Mann, Ltd., Toronto.
R. G. McLean, Toronto.

PRINTERS, catalogue:

R. G. McLean, Toronto.
*Southam Press, Ltd., Toronto and Montreal.

PRINTING AND LITHOGRAPHING

Lawson & Jones, Ltd., London, Ont.

PRODUCE

The Wm. Davies Co., Ltd., Toronto.

PROVISIONS

The Wm. Davies Co., Ltd., Toronto.

PULLEYS.

*Dodge Mfg. Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*Jeffrey Mfg. Co., Montreal, Que.

PULP, Bleached Sulphite
The Edward Partington Pulp and Paper Co., St. John, N.B.

PULP, Sulphide
Bathurst Lumber Co., Ltd., Bathurst, N.B.

PUMPS.
Spiramotor Co., London, Ont.
*Canadian Fairbanks-Morse Co., Ltd., Montreal.
*Bawden Machine Co., Ltd., Toronto.

PUMPS, ammonia
*Bawden Machine Co., Ltd., Toronto.

PUMPS, boiler feed.
*Bawden Machine Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt.

PUMPS, centrifugal
*M. Beatty & Sons, Ltd., Welland, Ont.
*Waterous Engine Works Co., Ltd., Brantford.

PUMPS, iron
Goold-Shapley-Muir Co., Ltd., Brantford, Ont.
*Waterous Engine Works Co., Ltd., Brantford.

PUMPS, tar
*Bawden Machine Co., Ltd., Toronto.

PUMPS, turbine, and equipment
*Bawden Machine Co., Ltd., Toronto.

PUMPS (Turbine and reciprocating)
John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

PyJAMAS AND NIGHT ROBES
Williams, Greene & Rome, Berlin, Ont.

RADIATORS
Taylor-Forbes Co., Ltd., Guelph, Ont.
Warden King, Ltd., Montreal, Que.

RAILINGS, brass and iron:
*Dennis Wire & Iron Works Co., London.

RAILWAY SIGNAL APPLIANCES
General Railway Signal Co. of Canada, Ltd., Montreal, Que.

RAILWAY SUPPLIES.
*Canadian Steel Foundries, Ltd., Montreal.
*Chicago Bridge & Iron Works, Bridgeburg, Ont.
B. J. Coghlin Co., Ltd., Montreal, Que.

RAILWAY TARIFF BINDERS
The Esdale Press Ltd., Edmonton.

READY-TO-WEAR GARMENTS, Ladies'
H. C. Boulter Co., Ltd., Toronto.

REAMERS
Pratt and Whitney Co. of Canada, Dundas, Ont.
*Butterfield & Co., Rock Island, P.Q.

"REDWOOD" lager
E. L. Drewry, Winnipeg, Man.

REED AND RATTAN GOODS
Canada Furniture Mfgs., Ltd., Woodstock, Ont.

REFRIGERATORS
Sanderson-Harold Co., Ltd., Paris, Ont.
Lee Mfg. Co., Ltd., Pembroke, Ont.

REFRIGERATING MACHINERY
The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

REFRIGERATORS, store, homes and institutions.
Ham & Nott Co., Ltd., Brantford, Ont.
John Hillock & Co., Ltd., Toronto.

REINFORCEMENT BARS
*The Steel Company of Canada, Limited, Hamilton.

REINFORCEMENT for concrete:
*Canada Wire & Iron Goods Co., Hamilton.
*Pedlar People Ltd., Oshawa, Ont.

RINGS, gold
Caron Bros., Montreal, Que.

RIVETS
Canadian Tube & Iron Co., Ltd., Montreal.
*The Steel Company of Canada, Limited, Hamilton.

RIVETS, bifurcated and tubular
Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

RIVETS AND BURS, iron, copper and brass
Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

ROLLERS, shade
Daly & Morin, Montreal, Que.

ROOFING, metal
*Metallic Roofing Co., Ltd., Toronto.
*Metal Shingle & Siding Co., Ltd., Preston.

ROOFING, ready to lay
*Canadian H. W. Johns-Manville Co., Toronto.
Standard Paint Co. of Canada, Ltd., Montreal, Que.
*Paterson Manufacturing Company, Toronto and Montreal.

ROOFINGS
*Bird & Son, Hamilton, Ont.

ROOF TRUSSES
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*Dominion Bridge Co., Ltd., Montreal.

ROPE
*Doon Twines Ltd., Doon, Ont.

ROPE, cotton
Hamilton Cotton Co., Hamilton, Ont.

RUBBER FOOTWEAR
Ames Holden, McCready, Ltd., Montreal, Que.

*Gutta Percha & Rubber, Ltd.
The Miner Rubber Co., Ltd., Granby, Que.
*Smart-Woods, Ltd., Montreal.

RUBBER GOODS.
*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

*Gutta Percha & Rubber, Ltd.
*Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

RUBBER MOULDS
Bawden Machine Co., Ltd., Toronto.

RUBBER PACKING
*Garlock Packing Company, Hamilton.

RULES
The Luffkin Rule Co. of Canada, Ltd., Windsor, Ont.

RYE
The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

SADDLERY HARDWARE
*Dominion Stamping Co., Walkerville, Ont.

SAFES
*Goldie & McCulloch Co., Ltd., Galt, Ont.

SAMPLE CASES
The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.
J. Eveleigh & Co., Ltd., Montreal, Que.

SANDERS:
*Berlin Machine Works, Ltd., Hamilton.

SANDPAPER
Delany and Pettit, Ltd., Toronto, Ont.

SASH CORD, cotton
Hamilton Cotton Co., Hamilton, Ont.

SALT
Canadian Salt Co., Ltd., Windsor, Ont.

SANITARY PAPER TOWELS:
*E. B. Eddy Co., Ltd., Hull.

SAW SHARPENING MACHINERY
*Canadian Hart Wheels, Ltd., Hamilton, Ont.

SAWS
Henry Disston & Sons, Ltd., Toronto.
Shurly & Deitrich, Galt, Ont.

SAWS, band:
*Berlin Machine Works, Ltd., Hamilton.

SAWS, crosscut
*Berlin Machine Works, Ltd., Hamilton.

SAWS, crosscut and oand
Shurly & Deitrich, Galt, Ont.

SAWS, circular mill
Shurly & Deitrich, Galt, Ont.

SAWS, hack:
*Victor Saw Works, Ltd., Hamilton, Ont.

SAWS, of all kinds
Simonds Canada Saw Co., Ltd., Montreal, Que.

SAWS, rip:
*Berlin Machine Works, Ltd., Hamilton.
Shurly & Deitrich, Galt, Ont.

SAWMILLS
G. & J. Esplen, Montreal, Que.
*The Waterous Engine Works Co., Ltd., Brantford, Ont.

SAWS, specialties
*Victor Saw Works, Ltd., Hamilton, Ont.

SCALES
The Gurney Scale Co., Hamilton, Ont.

SCALES, counter
The Gurney Scale Co., Hamilton, Ont.

SCALES, railway track, etc.
The Gurney Scale Co., Hamilton, Ont.

SCREENS:
*Canada Wire & Iron Goods Co., Hamilton.
*Jeffrey Mfg. Co., Montreal.

SCREEN DOORS AND WINDOWS
Sanderson-Harold Co., Ltd., Paris, Ont.
Ham & Nott Co., Ltd., Brantford, Ont.

SCREWS
*John Morrow Screw & Nut Co., Ltd., Ingersoll.
*The National Acme Mfg. Co., Montreal.

*The Steel Company of Canada, Limited, Hamilton.

SCREW PLATES
*Butterfield & Co., Rock Island, P.Q.

SECURITIES, engraved
American Bank Note Co., Ottawa, Ont.

SERGES
Rosamond Woollen Co., Almonte, Ont.

SHAFTHING.
Canada Forge Co., Ltd., Welland, Ont.
*Canadian Drawn Steel Co., Ltd., Hamilton.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
*Union Drawn Steel Co., Ltd., Hamilton, Ont.
*Dodge Mfg. Co., Ltd., Toronto.

SHANTY BLANKETS.
Slingsby Mfg. Co., Ltd., Brantford, Ont.

SHAPERS:
*Berlin Machine Works, Ltd., Hamilton.

SHEAR BLADES, iron
The Peter Hay Knife Co., Ltd., Galt, Ont.

SHEATHING
*Paterson Manufacturing Company, Toronto and Montreal.

SHEATHING, asbestos corrugated:
*Eureka Mineral Wool & Asbestos Co., Toronto.

SHEET METAL WARE (iron, galvanized and enamelled)
Sheet Metal Products Co. of Canada, Ltd., Toronto.

SHEET METAL STAMPINGS
Acme Stamping & Tool Works, Ltd., Hamilton, Ont.

SHELLAC
*Berry Bros., Ltd., Winnipeg.

SHINGLES, asbestos cement:
*Canadian H. W. Johns-Manville Co., Toronto.

SHIRTS
MacKenzie & Co., Ottawa, Ont.
Williams, Greene & Rome, Berlin, Ont.
Peerless Overall Co., Rock Island, Que.
John W. Peck & Co., Ltd., Montreal, Que.

SHIRTS, workmen's
A. R. Clarke & Co., Ltd., Toronto.

SHOE PEGWOOD
O. Chalifour, Quebec, Que.

SHOE LININGS
Galt Knitting Co., Ltd., Galt, Ont.

SHOES, running and athletic
Ames-Holden-McCready, Ltd., Montreal, Que.

SHOOKS
Barchard & Co., Ltd., Montreal, Que.

SILVER BULLION
Coniagas Reduction Co., Ltd., St. Catharines, Ont.

SILVERWARE
Toronto Silver Plate Co., Ltd.

SILVERSMITH
Canadian Wm. A. Rogers, Ltd., Toronto.

Standard Silver Co., Toronto.

SILVERWARE, sterling
Roden Bros., Ltd., Toronto.

SINKS, enameled
Amherst Foundry Co., Ltd., Amherst, N.S.

SKATES, figure
Canada Cycle & Motor Co., Ltd., Toronto.

SKATES, genuine Acme
Canada Cycle & Motor Co., Ltd., Toronto.

SKATES, hockey
Canada Cycle & Motor Co., Ltd., Toronto.

SKATES, ice
Canada Cycle & Motor Co., Ltd., Toronto.

SKIFFS
Peterboro Canoe Co., Ltd., Peterboro, Ont.

SKYLIGHTS:
*Metallic Roofing Co., Ltd., Toronto.

*Pedlar People Ltd., Oshawa, Ont.

SLEIGHS
Tudhope-Anderson Co., Ltd., Orillia, Ont.

SLIPPERS
Ames-Holden-McCready, Ltd., Montreal, Que.

SMOKE CONSUMERS,
*The Jones Underfeed Stoker Co., Ltd., Toronto.

SOAPS
J. Barsalou & Co., Ltd., Montreal, Que.

SOAP (soft, oil)
The Imperial Varnish & Color Co., Ltd., Toronto.
The Sherwin-Williams Co. of Canada, Ltd., Montreal.

SODA WATER FOUNTAINS
J. J. McLaughlin, Ltd., Toronto.

SOIL PIPE
Anthes Foundry, Ltd., Toronto.

SOLDER
Alonzo W. Spooner, Ltd., Port Hope, Ont.
*The Canada Metal Co., Toronto.

SOLDER, silver
Geo. H. Lees & Co., Hamilton.

SOLDER, wire and bar
*American Can Co., Montreal, and Hamilton.

SNOWSHOES
Holt, Renfrew, Ltd., Quebec, Que.

SPARK PLUGS
Canadian Carbon Co., Ltd., Toronto.

SPIRAL CONVEYORS.
Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

SPLIT PEAS
H. Murton, Guelph, Ont.

SPIKES, railway and marine
Starr Mfg. Co., Ltd., Dartmouth, N.S.

SPIRITS
The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

*Hiram Walker & Sons, Ltd., Walkerville, Ont.

SPORTING MEDALS AND TROPHIES
Roden Bros., Ltd., Toronto.

SPRAYERS
Spiramotor Co., London, Ont.

SPRING COTTERS
*Richards-Wilcox Canadian Co., Ltd., London, Ont.

SPRINGS
*Canadian Steel Foundries, Ltd., Montreal, Que.

B. J. Coghlin Co., Ltd., Montreal, Que.
Guelph Spring & Axle Co., Ltd., Guelph, Ont.

SPRINGS, carriages and automobile
Guelph Spring & Axle Co., Ltd., Guelph, Ont.

SPRINKLER SYSTEMS.
*Chicago Bridge & Iron Works, Bridgeburg, Ont.

*General Fire Equipment Co., Ltd., Toronto.

*Purdy, Mansell, Ltd., Toronto.
*Vogel Co. of Canada, Ltd., Montreal.

- STAINS**
R. C. Jamieson & Co., Ltd., Montreal, Que.
- STAINS, creosote shingle**
A. Muirhead Co., Ltd., Toronto.
- STAMPINGS**
*Dominion Stamping Co., Ltd., Walkerville, Ont.
- STAMPS, steel, brass and rubber**
Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.
- STAMP MILLS:**
*Jenckes Machine Co., Sherbrooke.
- STATIONERY, office**
Harris Lithographing Co., Toronto.
- STEAM PIPE and BOILER COVERINGS, asbestos:**
*Canadian H. W. Johns-Manville Co., Toronto.
*Eureka Mineral Wool & Asbestos Co., Toronto.
- STEAM SHOVELS**
*M. Beatty & Sons, Ltd., Welland, Ont.
- STEAM SPECIALTIES:**
*Sheldons, Ltd., Galt.
- STEAM TRAPS**
*Canadian Sirocco Co., Windsor, Ont.
*Canadian Morehead Manufacturing Co., Limited, Woodstock.
- STEEL:**
*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.
- STEEL BILLETS & BLOOMS**
*The Steel Company of Canada, Limited, Hamilton.
- STEEL BUILDINGS**
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*Dominion Bridge Co., Ltd., Montreal.
*Pedlar People, Ltd., Oshawa, Ont.
- STEEL CASTINGS**
*Canadian Steel Foundries, Ltd., Montreal, Que.
*Dominion Steel Foundry Co., Ltd., Hamilton.
- STEEL PEN STOCKS:**
*Jenckes Machine Co., Sherbrooke.
- STEEL RODS:**
*The Steel Co. of Canada, Ltd., Hamilton.
- STEEL SASH:**
*Dennis Wire & Iron Works, Co., London.
*Henry Hope & Sons, Ltd., Toronto.
- STEEL SHELVEING:**
*Dennis Wire & Iron Works, Co., London.
- STEEL WIRE RODS**
*The Steel Company of Canada, Limited, Hamilton.
- TELEPHONE ACCESSORIES,**
*Northern Electric Co., Limited, Montreal.
- STENCILS, brass**
Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.
- STEREOTYPING**
Central Press Agency, Toronto.
- STOKERS,**
*The Jones Underfeed Stoker Co., Ltd., Toronto.
- STOOLS AND BENCHES, piano and organ**
*Otterville Mfg. Co., Ltd., Otterville, Ont.
- STONE**
The Corinthian Stone Co., Guelph, Ont.
The Hagersville Contracting Co., Hagersville, Ont.
- STORE FITTINGS**
The Canadian Office & School Furniture Co., Ltd., Preston, Ont.
- STOVES**
Tudhope-Anderson Co., Ltd., Orillia, Ont.
Bedford Stove Co., Bedford, Que.
- STOVE BOARDS**
Sheet Metal Products Co. of Canada, Ltd., Toronto.
- STOVE LININGS**
Standard Clay Products, Ltd., St. Johns, Que.
- STOVES AND RANGES**
Bedford Stove Co., Bedford, Que.
Gurney Foundry Co., Ltd., Toronto.
Lee Mfg. Co., Ltd., Pembroke, Ont.
The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.
McClary Mfg. Co., London, Ont.
- STRETCHERS, lace curtain**
*Otterville Mfg. Co., Ltd., Otter
- STRUCTURAL STEEL**
Dominion Bridge Co., Montreal.
*Hamilton Bridge Works Co., Ltd., Hamilton.
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*The Structural Steel Co., Ltd., Montreal.
- SUIT CASES**
J. Eveleigh & Co., Ltd., Montreal.
The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.
- SURFACERS:**
*Berlin Machine Works, Ltd., Hamilton.
- SWITCHBOARDS**
*The Canadian Independent Telephone Co., Ltd., Toronto.
- SWITCHES, railway**
Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.
- SWITCHES AND FROGS**
*Canadian Steel Foundries, Ltd., Montreal, Que.
- SWITCH STANDS**
*Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.
- TABLES, billiard**
Samuel May & Co., Toronto.
- TABLE COVERS, chenille**
Hamilton Cotton Co., Hamilton, Ont.
- TAGS, shipping and factory**
Business Systems, Ltd., Toronto.
- TANKS**
*Chicago Bridge & Iron Works, Bridgeburg, Ont.
Goold-Shapley-Muir Co., Ltd., Brantford, Ont.
*Ontario Wind Engine & Pump Co., Ltd., Toronto.
*The Goldie & McCullough Co., Ltd., Galt.
*The Watrous Engine Works Co., Ltd., Brantford.
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- TAPS**
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*Butterfield & Co., Rock Island, P.Q.
- TAP WRENCHES**
*Butterfield & Co., Rock Island, P.Q.
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Gummed Papers, Ltd., Brampton, Ont.
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*Northern Electric Co., Limited, Montreal, Que.
- TELEPHONE APPARATUS**
*The Canadian Independent Telephone Co., Ltd., Toronto.
- TELEPHONES, Automatic**
*Canadian Independent Telephone Co., Toronto.
- TENTS**
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Turner, J. J., & Sons, Peterborough, Ont.
*Scythes & Co., Ltd., Toronto.
- TERRA ALBA**
*Albert Mfg. Co., Hillsborough, N.B.
- TERRA COTTA (architectural)**
Toronto Plate Glass Importing Co., Ltd., Toronto.
- THEATRE CURTAINS, asbestos:**
*Canadian H. W. Johns-Manville Co., Toronto.
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*Canadian Billings & Spencer, Ltd., Welland.
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Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
*Gutta Percha & Rubber, Ltd.
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*International Time Recording Co. of Canada, Ltd., Toronto.
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Sheet Metal Products Co. of Canada, Ltd., Toronto.
- TIRES, cycle, auto and truck.**
Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
*Gutta Percha & Rubber, Ltd.
- TRADE MARKS AND DESIGNS**
Kidout & Maybee, Toronto.
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- TRANSFORMERS, power**
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- TRANSFORMERS, distributing**
*Canadian Crocker Wheeler Co., Ltd., St. Catharines, Ont.
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*The Goldie & McCulloch Co., Ltd., Galt, Ont.
*The Watrous Engine Works Co., Ltd., Brantford.
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*Richard-Wilcox Canadian Co., Limited, London, Ont.
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- TRUCKS**
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*The Canadian Sirocco Co., Ltd., Windsor, Ont.
Northern Crane Works, Limited, Walkerville.
- TRUCKS, brick, tile and lumber**
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- TRUNKS**
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J. Eveleigh & Co., Ltd., Montreal, Que.
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- UNIONS**
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- VACUUM PUMPS**
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*Kerr Engine Co., Ltd., Walkerville.
- VALVES, for steam and water**
Jenkins Bros., Ltd., Montreal, Que.
- VALVES, regrinding globe, angle cross checks, swing checks, etc.**
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- VARNISHES**
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*Dougall Varnish Co., Ltd., Montreal.
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- VENTILATORS:**
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*Pedlar People, Ltd., Oshawa, Ont.
- VINEGAR**
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- WAGONS**
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- WALL BOARD**
*Bird & Son, Hamilton, Ont.
- WALL COPING**
Standard Clay Products, Ltd., St. Johns, Que.
- WASHERS**
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- WASHERS, plate or wrought**
London Rolling Mill Co., Ltd., London, Ont.
- WASTES, wool and cotton**
Factory Waste and Metal Co., Montreal, Que.
*Scythes & Co., Ltd., Toronto.
- WATER-PROOF CEMENT COATING**
Benjamin Moore & Co., Ltd., Toronto.
*Paterson Manufacturing Company, Toronto and Montreal.
- WAXED PAPER**
Business Systems, Ltd., Toronto.
- WEBBING, elastic**
Hamilton Cotton Co., Hamilton, Ont.
- WEBBING, non-elastic**
Hamilton Cotton Co., Hamilton, Ont.
- WHEELS**
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- WHEELS, corundum**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.
- WHEELS, emery**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.
- WHEELS, propeller, iron and steel**
*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.
- WHEELS, turbine, water.**
*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.
- WHEELS, water (impulse type)**
John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

WELL DRILLING TOOLS AND MACHINERY
Oil Well Supply Co., Ltd., Petrolia, Ont.

WHIPS AND LASHES
Lay Whip Co., Rock Island, Que.

WHISKY
*Hiram Walker & Sons, Ltd., Walkerville, Ont.

WHITE ARSENIC
Coniagas Reduction Co., Ltd., St. Catharines, Ont.

WHITE ENAMEL
*Berry Bros., Ltd., Winnipeg.

WHITE LEAD
Brandram-Henderson, Ltd., Montreal, Que.
A. Ramsay & Son Co., Montreal, Que.

WINDMILLS
*Goold-Shapley-Muir Co., Ltd., Brantford, Ont.
*Ontario Wind Engine & Pump Co., Ltd., Toronto.

WINDOW SHADES
Daly & Morin, Montreal, Que.

WIRE
*The Steel Company of Canada, Limited, Hamilton.
*Eugene F. Phillips, Electrical Works, Ltd., Montreal.
The Graham Nail Works, Toronto

WIRE CLOTH
*Canada Wire & Iron Goods Co., Hamilton.
C. H. Johnston & Sons, Ltd., Montreal, Que.

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*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRED GLASS:
*Metallic Roofing Co., Ltd., Toronto.

WIRE GUARDS
*Canada Wire & Iron Goods Co., Hamilton.
C. H. Johnson & Sons, Ltd., Montreal, Que.

WIRE, Insulated Electric,
*Northern Electric Co., Limited, Montreal.

WIRE, insulated electric:
*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRE ROPE
The Dominion Wire Rope Co., Ltd. Montreal.
*The B. Greening Wire Co., Ltd. Hamilton.

WIRE, Weatherproof:
*Northern Electric Co., Limited, Montreal.
*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRE WORK
C. H. Johnson & Sons, Ltd., Montreal, Que.
*Canada Wire & Iron Goods Co. Hamilton.
*The Geo. B. Meadows, Toronto Iron and Brass Goods Works Co. Ltd., Toronto.

WOOD
Standard Fuel Co., Toronto.

WOOD PRINTERS
Barchard & Co., Ltd., Toronto.

WOOD PULP, mechanical
La Cie de Pulpe de Chicoutimi, Chicoutimi, Que.

WOOD SPLIT PULLEYS.
*Dodge Mfg. Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.

WOOL
*H. V. Andrews, Toronto.

WORSTED COATINGS AND SUITINGS
Rosamond Woollen Co., Almonte, Ont.

WRAPPERS, book, bottle, etc.
*The Thompson & Norris Co., of Canada, Ltd., Niagara Falls, Ont.

WROUGHT IRON PIPE
*The Steel Company of Canada, Limited, Hamilton.

WROUGHT PIPE:
*The Steel Co. of Canada, Ltd., Hamilton.

YARNS, cotton
Hamilton Cotton Co., Hamilton, Ont.

ZINC, electrical
*The Canada Metal Co., Toronto.

*For Display Advertisement See Index Page 707

THE BOOTH-COULTER COPPER & BRASS COMPANY, LTD.
SHEETS TUBES COPPER & BRASS AND RODS
SPECIAL SIZES CUT TO ORDER FROM LARGE STOCK—PROMPT SHIPMENT
115-121 SUMACH STREET TORONTO, CANADA

MADE-IN-CANADA

Toronto, Ontario

Mr. Manufacturer:—

Are you sincere in your desire to boost and make greater the British Empire by the buying of Canadian made goods? If so, look over the following list of high-grade oils, greases, compounds and paints manufactured in our oil refinery at Petrolia and our paint works at Toronto, Ontario. A postal card from you will bring you full information regarding the goods in which you are interested.

CYLINDER OIL

ENGINE OIL

MACHINE OIL

DYNAMO OIL

TANNER'S OIL

BLACK

LEATHER OIL

PARRAFINE
WAX

MINERAL
SOAP STOCK

BENZINE



WHITE LEAD

READY MIXED
PAINT

COLORS IN
OIL

VARNISHES

BLACK
JAPANS

STEEL BRIDGE
PAINTS

ROOFING
PAINTS

CUP GREASE

LINSEED OIL
SOAP

SERVICE FIRST

"BEATTY"

Material Handling Plant

Has Constant Service built right into it.

We have successfully met the growing demands of the contracting business for Fifty Years, and our reputation is based on the Service idea.

WE MAKE

Hoisting Engines, Dipper Dredges, Clamshell Dredges, Steel Scows, Dump Scows, Drill Boats Steel Derricks, Derrick Irons, Pile Drivers, Centrifugal Pumps and the "FAIVRETTE" CLAM BUCKET.

M. Beatty & Sons, Limited

MAIN OFFICE AND WORKS: Welland, Ont.

TORONTO BRANCH: 4th Floor, 154 Simcoe Street

AGENTS:

H. E. Plant, 1790 St. James St., Montreal
E. Leonard & Sons, St. John, N.B.
Robt. Hamilton & Co., Vancouver, B.C.
Kelley-Powell Limited, McArthur Bldg., Winnipeg

INDUSTRIAL CANADA



To Manufacturers Who Spend \$1,000 to \$3,000 a Year in Advertising

WE have originated, tried out and proven practical a plan of advertising for manufacturers with small appropriations, that comes as near to securing guaranteed, tangible, profitable results as any plan we have ever had experience with. It is one that can be successfully adapted to many diverse lines of business. Would you be interested to know how it could be adapted to your needs?

If so, write us. We are willing to put our time and money against your time and consideration in an endeavor to convince you of the merits of our proposition.

The evidence of your interest and the working out of complete suggestions by us will not obligate you in any way should you decide not to go ahead.

We suggest that if you are interested you write, naming a time when it would be convenient for you to see a member of our Executive for a preliminary interview.

J. J. GIBBONS, LIMITED

General Advertising Agents

Head Office :

MONTREAL

TORONTO

WINNIPEG

Cables—Gibjay, Toronto.

Codes—Liebers. ABC 5th Edition

PUBLISHED BY THE CANADIAN
MANUFACTURERS ASSOCIATION INCORPORATED.
HEAD OFFICE BRANCH OFFICES,

• TORONTO • MONTREAL, HAMILTON, WINNIPEG, VANCOUVER, HALIFAX, QUEBEC.

MALLEABLE IRON CASTINGS

The Pratt & Letchworth Company Limited

BRANTFORD ONTARIO

AUTOMOBILE PARTS
DROP FORGINGS



We have erected and are now operating

THE LARGEST COMMERCIAL DROP FORGE PLANT IN CANADA

We are equipped to handle large forging contracts.
This expansion also increases our stamping facilities.
We stand by our Motto: Quality and Service.

SHEET METAL WORK
GENERAL STAMPINGS

DOMINION FORGE & STAMPING CO., LIMITED
Walkerville - Ontario



"Giving Satisfaction"

This is the true measure of a manufacturer's service to his constituency. It has been our constant aim since we commenced to do business eight years ago. Our large and rapidly expanding trade is proof that our products and our methods of doing business appeal to our customers.

The greatest possible care and attention are given at our Refinery to the manufacture of the different lines—the highest obtainable quality being our goal. The statement "WE MAKE THAT GOOD OIL" has now passed into a proverb as referring to the products of The British American Oil Co.

We guarantee every gallon of British "Peerless" and Motor Gasolene, Benzine, Lamp Oil, Lubricating Oil, "Ford Motor Oil," "Autolene" for other motors, Fuel Oil, Road Oil and other Products.

We are prepared to live up to the guarantee that if any of our goods are not as represented they may be returned at our expense and money will be refunded if already paid for same. In no case will we allow a customer to make a loss on account of our products not being equal to representation.

We make our products as good as we know how and have justifiable confidence in them. Our customers have a right to demand value for their money and we see that they get it. We do not pose as philanthropists; this is pure business.

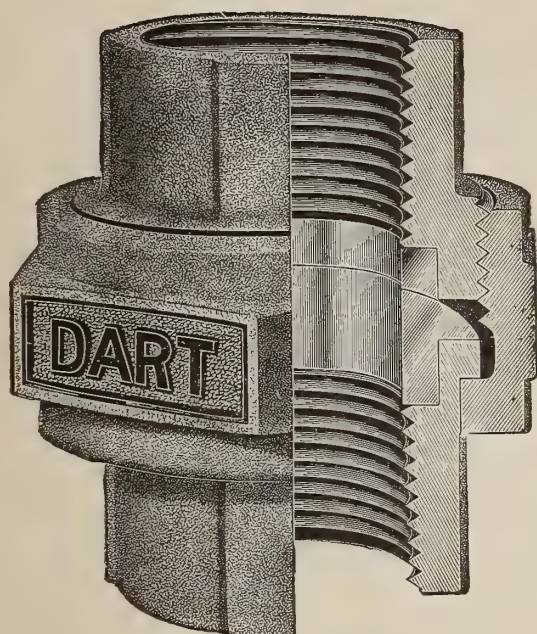
Our watchword is "GIVING SATISFACTION."

The BRITISH AMERICAN OIL CO., Limited

REFINERS, FOOT OF CHERRY STREET, TORONTO

Head Office: LUMSDEN BUILDING, TORONTO

Branches: MONTREAL, OTTAWA, LONDON, WINDSOR



Leaking Pipe Connections

AND

Dart Unions

are Never at the Same Joint.

Every Leak, No Matter How
Small, Means Loss.

Dart Unions, and Your Jobber Sells Them, Prevent Loss.
Use Proves Best. Sample Waiting for You.

DART UNION CO., LTD., Toronto

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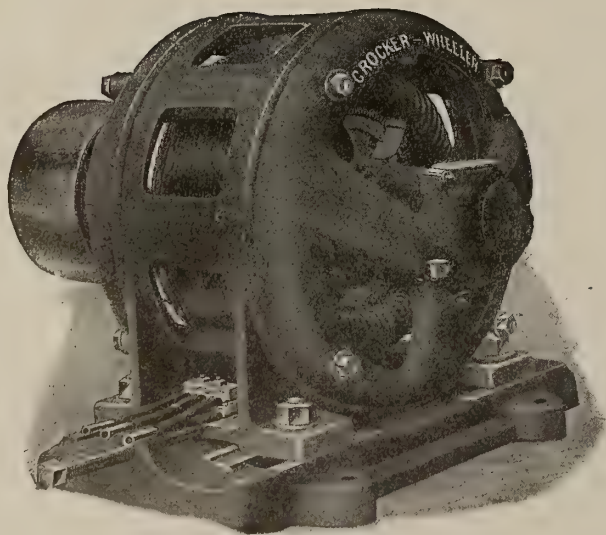
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THE DESIGN OF CROCKER-WHEELER INDUCTION MOTORS

INCLUDES :

Heavy Shafts

Large Journals

High Power Factor

Excellent Efficiency

They have many other desirable features;
Bulletin 155 describes them.

THE CANADIAN CROCKER-WHEELER CO., Limited

MANUFACTURERS AND ELECTRICAL ENGINEERS

Head Office and Works : St. Catharines

District Offices : Montreal, Toronto, Vancouver

We Have Prepared the Way

WE HAVE SPENT thousands of dollars on Street Car patrons impressing on them the advantages of purchasing "Made-in-Canada" Products.

We were the first in the field with a "Made-in-Canada" campaign, prepared, placed and carried out entirely at our own expense, for the benefit of Canadian Street Car advertisers.

Canadian Manufacturers

who use Street Car advertising get the direct benefit of all the money we have spent, in addition to getting the greatest possible amount of the best advertising for every dollar of their own they spend on Street Car space.

There are 1,735,685 passengers carried daily on the street car lines we control throughout Canada, and with these we have prepared the way for "Made-in-Canada" campaigns.

They are ready to purchase goods made in Canada, but they have to be told what goods are made here.

At a cost of only One Dollar you can reach over 48,000 of these consumers through an advertisement in the Street Cars.

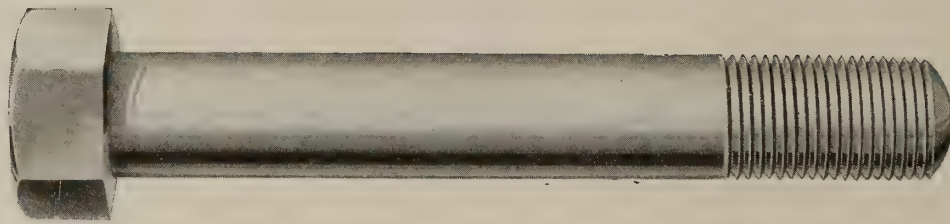
Let us tell you more about it. Any of our offices will respond promptly to a request for information.

The
Canadian Street Car Advertising Company
Limited

MONTREAL

TORONTO

WINNIPEG



NAMCO *Canadian Made* Standard Screw Products

The facilities of the NAMCO plant at Montreal for making Standard Screw Products, true to gage, uniform and quickly, means a big saving in time in your assembling department. NAMCO Screws and Nuts can be used right from the packing case.

Here's the NAMCO List of Standard Screw Products :

Cap Screws

V., U.S.S. Thread.

Set Screws

V., U.S.S. Thread.

S.A.E. Standard

Steel Screws, Studs—
V-Thread.

Nuts

Plain, S.A.E. or V.
Thread.

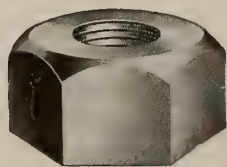
Nuts

Castellated, S.A.E.
Thread.

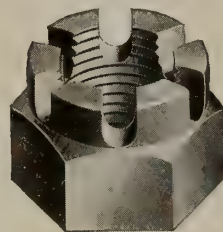
Nuts

Hexagon Brass Stan-
dard or to Specifications.

Special Screw Machine Work from samples or blue prints up to $2\frac{1}{4}$ in. diameter and $10\frac{1}{2}$ in. long.



*Catalog of Standard
Screws, Nuts and Studs
sent on request. Ask for
the "Red Book."*



THE NATIONAL-ACME MANUFACTURING COMPANY

De Courcelles St.
and G.T.R., St. Henri

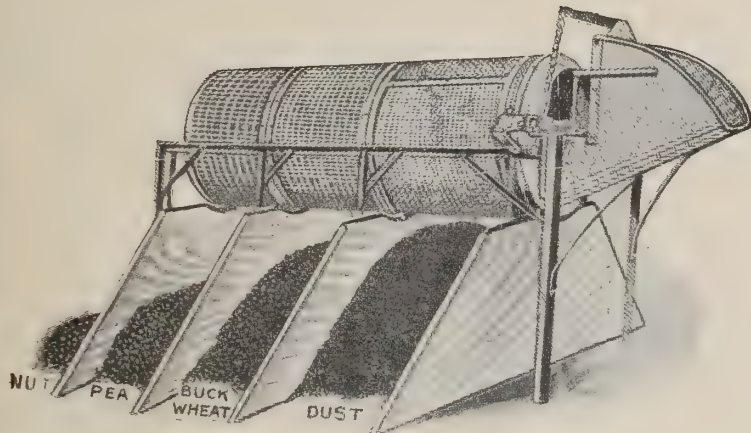
MONTREAL, P.Q.

Every Factory Uses Screens

FOR SOME PURPOSE OR ANOTHER

We Make Screens for All Purposes

ROTARY SCREENS
Hand, Motor or Steam Power



SAND SCREENS

GRAVEL SCREENS

CEMENT SCREENS

COAL SCREENS

FOUNDRY RIDDLES

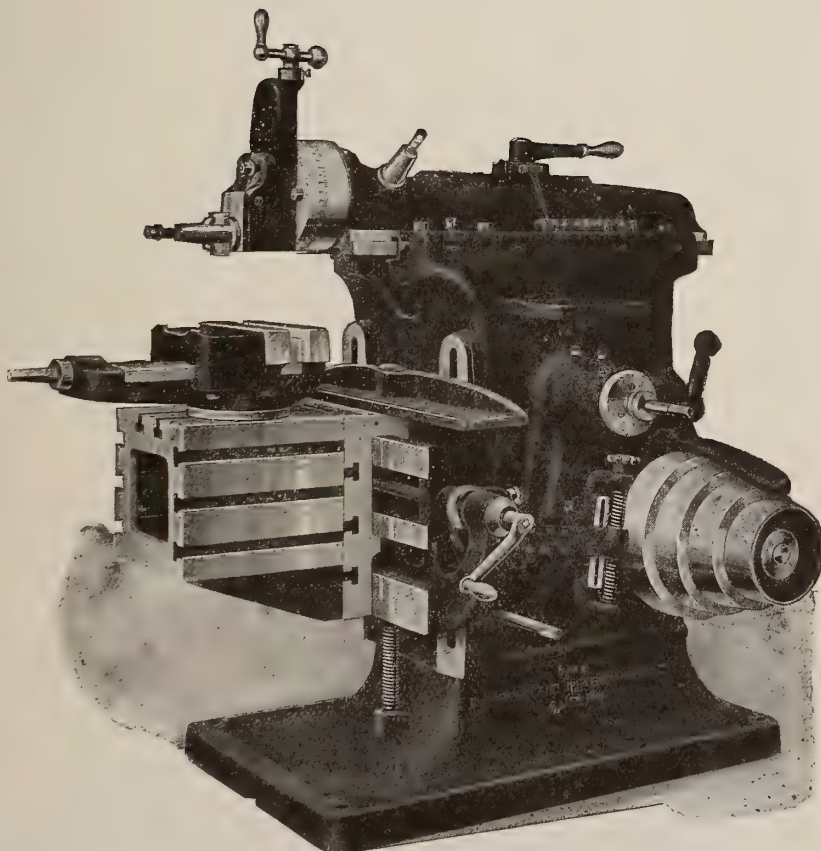
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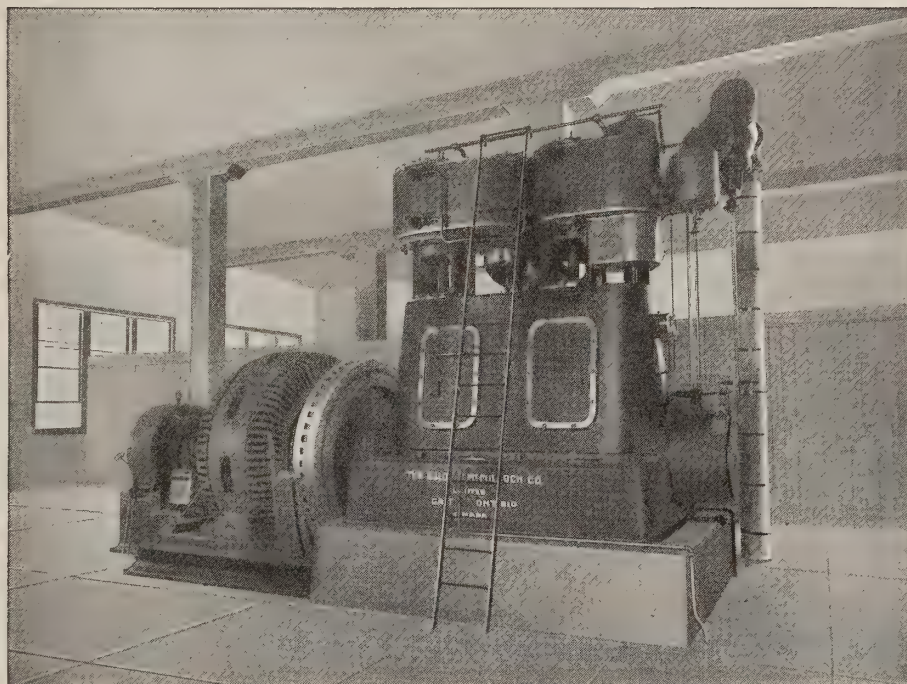
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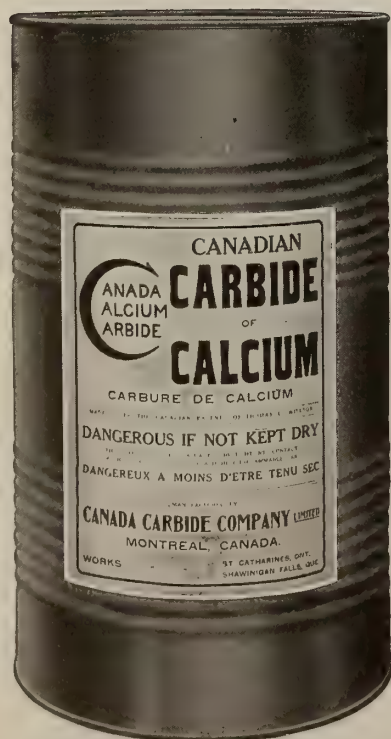
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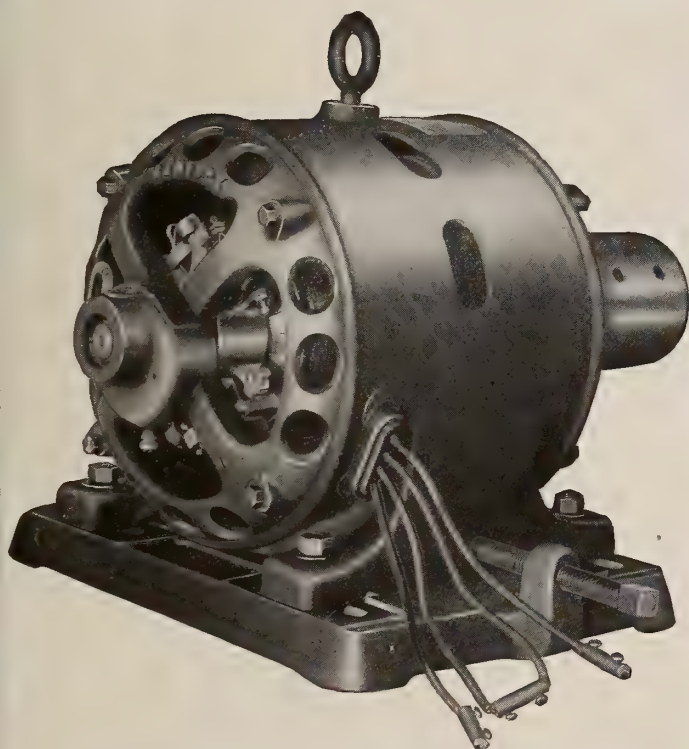
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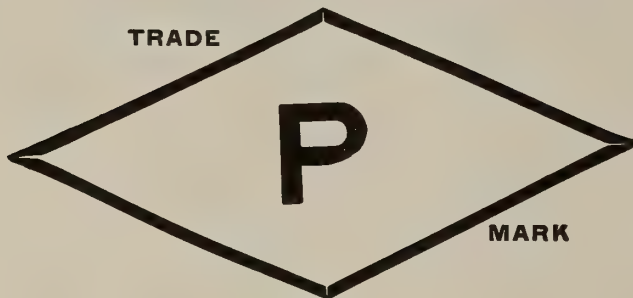
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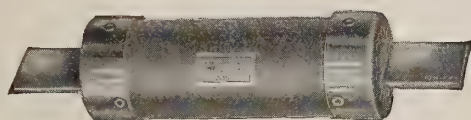
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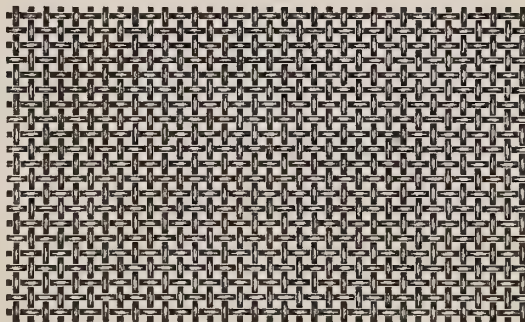


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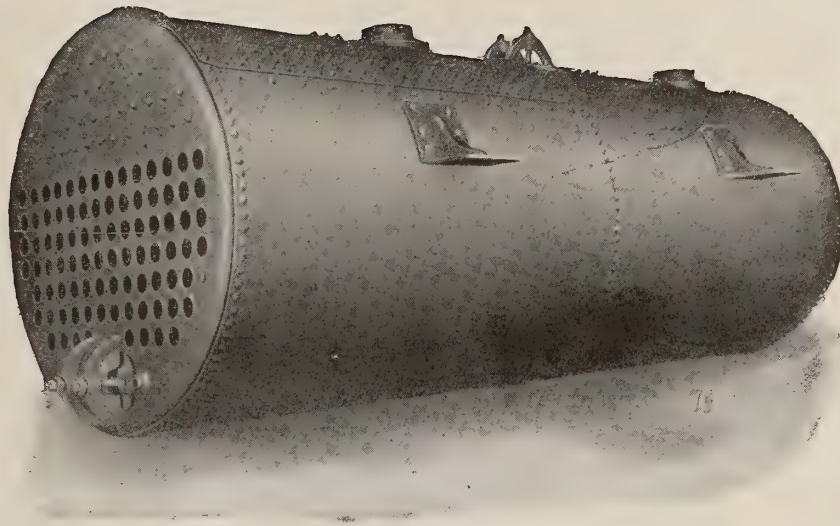
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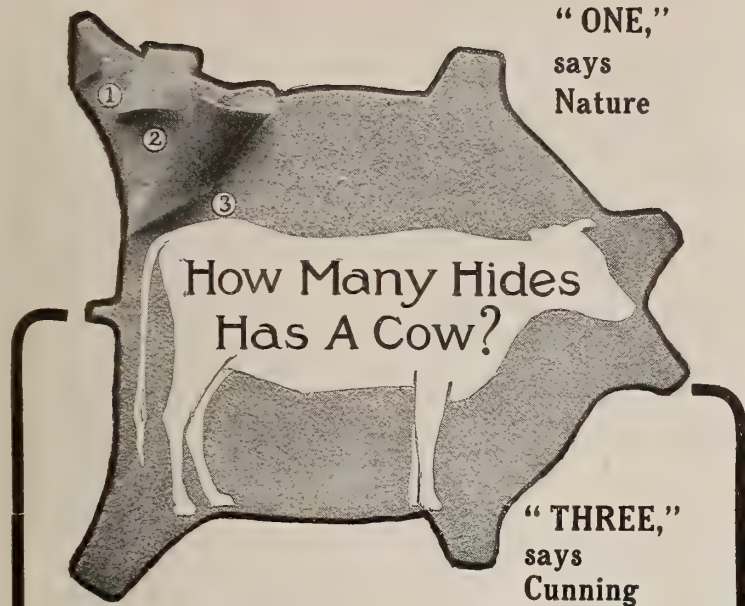
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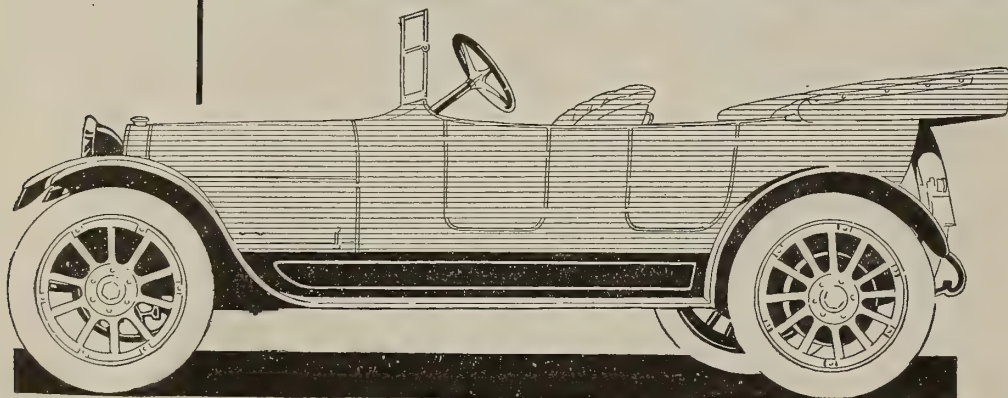
These cars came out to France early in February, after four months of the hardest work any cars have ever been put to, on Salisbury Plain, England. They came through everything with colors flying. The only real trouble we have experienced has been the front springs, which after all is not to be wondered at, when one considers the terrible roads over which they have been driven. A certain amount of trouble was experienced with the clutch on one or two, but this was really on account of the lack of spare parts which was the greatest drawback to the successful running of these cars. The electrical system throughout was entirely satisfactory. not one, to our knowledge, having failed at any time. These cars were in constant demand during the whole

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We are, yours faithfully,

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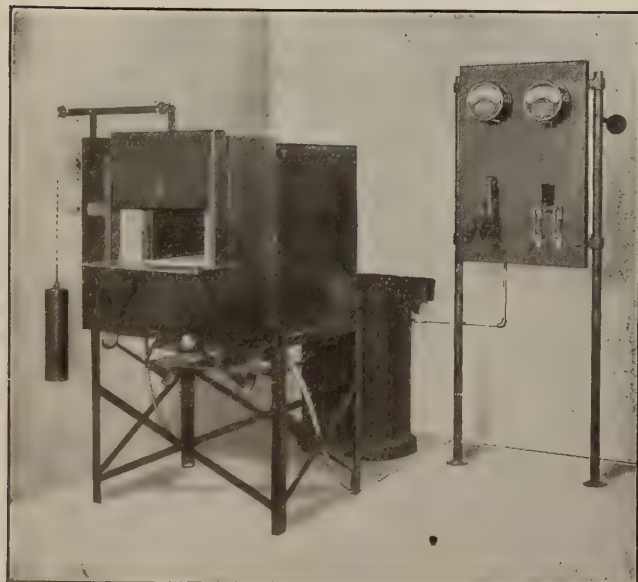


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The September Bank Statement showed increased deposits of one kind and another of over \$46,000,000 and that Canadians are borrowing some \$53,000,000 less than a year ago. *Others* besides farmers have money.

The Railway Earnings for four weeks of the month of October show an increase of \$5,500,000 over the same period a year ago.

Where Canada four years ago was importing \$300,000,000 more than it exported per annum it is the other way about now, and we are exporting \$100,000,000 more than we import.

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To fill these shelves so that farmers and others may spend their millions, factories will have to be—many are now—busy.

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Free Industrial Alcohol.

WHEN casting about for ways and means to stimulate production, to increase employment and to add to Canada's material prosperity, the Government should not overlook the simple and inexpensive expedient of removing the excise duty on alcohol (always of course under suitable regulations and restrictions) when used for industrial purposes.

For a great many industries alcohol, either pure or denatured, is a necessary raw material. In one form or another its use is desirable, if not actually necessary, in the manufacture of varnishes, polishes, lacquers, stains, paints, enamels, oil cloth, linoleum, photographic plates and papers, soap, fulminate, electric lamp filaments, incandescent mantles, rubber, aniline dyes, fireworks, matches, steel pens, artificial flowers, inks, celluloid, felt hats, crepe, chloroform, ether, bromide, collodion, disinfectants, liniments, lotions, capsules, insecticides, surgical dressings and numerous other articles.

Recognizing its wide application to industry nearly every progressive country has adopted regulations to encourage rather than discourage its use. The United King-

dom, for example, has not only made alcohol free of excise when employed in manufacturing processes, but permits it to be denatured by any one of a score of methods, according as to the use to which it is to be put may require. Usually the denaturant employed must have the effect of making the alcohol non-potable, but where anything other than pure spirit would be unsuitable to the purpose to be served, even it may be had duty free under proper restrictions and safeguards.

The United States made alcohol free for industrial purposes in 1906, after a thorough investigation of the whole subject by a special Committee of Congress. Among the conclusions come to by the Committee were that the removal of the excise would be attended by the following benefits:—

1. It would assist agriculture, which provided the raw materials for alcohol, (a) by ensuring a wider and more stable market for those raw materials; (b) by promoting crop rotations advantageous to the soil; (c) by providing cheap alcohol for lighting and power purposes on the farm.

2. It would promote manufacturing, (a) by providing one of the best and most suitable raw materials at lowest possible cost; (b) by opening the door for the establishment of industries which could not then be profitably engaged in, owing to the high price of alcohol; (c) by enabling manufacturers to meet the competition of foreign made goods, both at home and abroad.

That these expectations have in a large measure been realized is a fair inference to draw from the following significant figures showing the United States consumption of industrial alcohol in 1907, the year after the change, and in 1914.

Year.	Completely Denatured.	Specially Denatured.	Total Wine Gallons.
1907	1,397,861	382,415	1,780,276
1914	5,213,129	5,191,846	10,404,975

Discussing the effect of this legislation in the United States, the Canadian Section of the Society of Chemical Industry, in a bulletin issued last June says: "There are few lines of manufacture that have not had some measure of advantage from the reduction in price of alcohol to one-fifth its previous value, and in some manufactured products, such as varnishes, ethers and fulminates, the effect has been revolutionary."

Canada can ill afford to deny its manufacturers a privilege enjoyed by their more highly capitalized and more highly specialized competitors; still less can it afford to curtail opportunities for industrial employment with a steadily increasing number of returned soldiers on its hands. This is a big question, one that deserves to be handled in a big way. It has been handled most successfully by big countries, and Canada must follow their example if she is to rise to their class.

Panama Canal Route.

TENS of millions have been spent upon our inland waterways—deepening channels, lighting and buoying courses, building canals and improving harbors. For a similar purpose, hundreds of millions have been spent upon the Panama Canal. The money for the former has come out of our own pockets; the money for the latter has been put up by the United States.

To cash in on our own investment we must employ lock tenders to open and close the gates of our canals. We do it cheerfully and think nothing of it. To profit by the bigger investment made by the United States all we need do is to employ a Customs Officer at New York to open and close the gates on bonded merchandise. But we don't do it and that's where we fool ourselves.

We cannot have too much transportation of the kind that does not cost us anything. We can have, and we already have, too much transportation of the kind that loads us down with interest charges and high freight rates.

The Panama Canal is nature's route for the movement of staples from the Atlantic to the Pacific. So long as it remains open they are as certain to move by that route as water is certain to run down hill. If obstacles are placed in the way of Canadian goods using that route, then the market will be supplied with United States goods to which the route is wide open.

The railways can and will take care of themselves, customs officer or no customs officer. They will be in no wise hurt by a little healthy competition; on the contrary they will be sharers with the rest of Canada in the benefits that must arise when the shackles are lifted from inter-provincial trade.

A Three Cent Stamp.

WHEN are we to be permitted to renew our acquaintance with the Three Cent Postage Stamp?

We understood the extra cent now required on letters was in the nature of a war tax—that the Government needed the money. If it does, it might just as well make all the money it can on the transaction, and not be satisfied with less than it can get.

It costs no more to print a three cent stamp, or a fifty cent stamp for that matter, than it does a one cent stamp.

The paper is the same, the ink is the same, the press work is the same. By forcing the public to use two stamps, sometimes three, when one would serve the purpose, the Postmaster General is adding 100 to 200 per cent. to his manufacturing cost without getting anything more for his product. On the ground of economy, persistence in the present course is unjustifiable, and these are times when the practice of economy should be observed by all, especially by the Government, to whom we naturally look for a good example.

But the convenience of the public, of whom the Government after all is only the servant, furnishes a stronger reason why the new issue should be put out forthwith. A public that submits cheerfully to the extra charge should not be penalized by having to perform extra labor as well.

It was to study the convenience of the public that a seven cent stamp was brought out in order that registration of a two cent letter might be effected by affixing a single stamp. There must now be from 50 to 100 transactions, each requiring the use of a three cent stamp, for every transaction to which a seven cent stamp was formerly applicable. Why then is the popular demand not satisfied?

Unless something happens soon, we may have to take up a subscription to buy the Postmaster-General an alarm clock for a Christmas present.

Show Them the Door!

THE Grand International Brotherhood of Railroad Employees, with which is affiliated the Brotherhood of Railroad Station Men, has again been taking up a collection for itself in Canada.

At one time it used to come out boldly and ask manufacturers for a subscription to the benefit fund out of which it cared for yard men, station men, and other freight handlers when they met with an accident or became sick. The manufacturer was allowed to gather the impression that his generosity would be made known to "the boys," and that his freight would move more safely and quickly in consequence. No suggestion was made, of course, as to what would happen if he turned down the request, but he didn't need to be very astute to draw the inference he was intended to draw.

This year the Brotherhood is varying its programme by asking manufacturers to take advertising space in a History it is getting out. As an advertising medium the book is of little or no value to many of the manufacturers who are being solicited. Brotherhood agents admit as much, yet they are pressing manufacturers to take space irrespective of considerations of value.

The success that has heretofore attended such efforts to prey upon the susceptibilities of credulous and timorous shippers seems to have been based largely on the belief that Canadian freight handlers participated in the proceeds, and might expedite or hinder freight movements

(always surreptitiously of course) according as subscriptions were given or withheld. It would seem only proper, therefore, to make known the fact that these Brotherhood agents are milking Canadian manufacturers, not for the benefit of Canadian work-people (for respectable unionism in Canada repudiates them) but simply to swell the fund out of which sick benefits are paid to United States workmen, and incidentally, of course, to justify the high salaries and commissions which the officers of the Brotherhood never forget to vote themselves.

Can You Beat This?

SELDOM does it happen that the Editor of any paper is able to turn to his own advertising columns for copy. We have heard of Editors who regularly receive their inspiration from that quarter, but ready-made copy is a rarity.

Ordinarily when a man buys space he uses it to promote the interests of his own business, but instances do sometimes occur where an advertiser actually pays money for the privilege of saying a thing that the Editor would be glad to say, and proud to claim as his own production.

A case in point is the advertisement of the Steel Company of Canada, Limited, appearing elsewhere in this issue. It epitomizes in almost classic form all that the "Made in Canada" movement stands for. We congratulate the Company upon the splendid sentiments here quoted, and recommend its ideals as worthy of general acceptance. They are as broad as the Empire and as high as the Stars!

OUR SACRED DUTY.

To contribute to a Fund for the relief of the unemployed does not discharge or liquidate the duty we owe to the brave men who are sacrificing their lives in the Trenches that we may live and enjoy the Blessings of Liberty and Happiness.

Better by far that we extend our Consideration in an effort to use in our Mills, our Factories, in our Cities and our Homes all over this fair land, the products that Canadian labor produces, so that when the Boys come marching Home they will be welcomed back to a Prosperous and Happy Canada.

Their sacrifice is worthy of our greatest effort—Our Duty is Plain; Canada with Canadian Labor and Capital can produce, manufacture and distribute, products sufficient to keep the Wheels of Industry turning to the limit. The Song of Prosperity and Happiness should ring out all over the land.

Let us sincerely pledge, to the extent of our needs, to purchase materials produced in Canada by Canadian Workmen, and the result of our efforts will return to us the Blessings of a Prosperous and Happy Nation.

OUR MATERIAL DUTY.

Consideration, Courtesy and Right Intent, all add to the sum of Human Happiness. Not only do they benefit those to whom they are extended, but they survive in various forms, and add to the well-being of the Business World.

Quality plus Service is the basis on which prices are made. Competition in Quality and Service is a healthy condition, but competition in price alone tends to business ruin. All Service rendered has a far-reaching effect which tends to a better understanding, and Quality is remembered long after the price is forgotten.

Let the Standard of the Canadian Manufacturer and Producer be as High as the Best, and "Made in Canada" officially stamped on any article correspond with the mark "Sterling" on Silver.

Let us attune ourselves to the Highest Standard of Quality and Service, and pledge to devote to this end all the means we possess, in the belief that Bigger Business will result through the gratitude of those we serve.

We are all one. No one can Thrive alone. No one Suffers alone. Industrial Prosperity tends to Happiness for all, and the Manufacturer who nails to the mast the Flag of Quality and Service is assisting in the development of a better and saner Business condition.

A Horse of Another Color.

ORGANIZED Labor misconstrued the purposes of the Lemieux Act when it sent deputations to the Toronto City Council, telegrams to the Minister of Labor and petitions to the Premier demanding that the Hydro-Electric Commission of that city be forced to accept the majority award of the Board appointed under the Act to investigate the complaints of the Commission's employees. And what is more, Organized Labor knowingly and wilfully attributed to the Act a purpose which it had itself disclaimed and denied, and which it will just as quickly disclaim and deny again when it suits its purpose to do so.

In other cases, notably the C. P. R. machinists' strike (1908) and the Dominion Coal Co's. strike (1909-10), when the majority awards were against the demands of the employees, the Unions did not fail to stand upon their right to strike. With such precedents before them, established by themselves, how could they consistently deny the right of the employers to accept or refuse the award as they saw fit?

The Lemieux Act is not an Act designed to *compel* conciliation. It simply provides the machinery for investigation, thereby precluding all possibility of precipitate action on either side. It is based on the theory that a proper appreciation by each of the other's case will often point the way to a satisfactory solution. It does not say, however, that the award of the Board shall be binding. If the parties so agree, an order may issue

making the award binding, otherwise the two parties to the dispute may agree to disagree.

An examination of the disputes investigated under the Act will disclose the fact that more awards have been rejected by employees than by employers. Why then this sudden display of sanctimonious regard for a principle that finds no enunciation in the Act, and which Organized Labor has publicly denounced in the abstract and repudiated in the concrete?

The War Loan and the Hudson Bay Railway.

THE Domestic War Loan seems to have been a huge success, and as a result we are all a bit prouder of ourselves and of our country.

The assurance given that every dollar of it was to be spent for war purposes was without doubt the most potent factor contributing to its success. As an investment it naturally had its attractions, especially for the small subscriber, but the mere desire to earn five and one-half per cent. would never of itself have accounted for the large subscriptions made by individuals and corporations to whom opportunities for more profitable investments were open. Even the small subscriber deliberately passed up bigger yields available from provincial and municipal securities, in order to be in on a transaction which appealed to his patriotism. Nothing but this widespread eagerness to help prosecute the war to final victory will explain the immediate and generous response that the issue met with.

Meanwhile, work on the Hudson Bay Railway goes on. The money still to be spent on that inane undertaking will probably equal the amount which the public have just put up for war purposes. If that work were now stopped, absolutely and finally, the second War Loan, of which we have already begun to hear murmurings, could be deferred. It would mean, of course, that we would lose everything we have already put into a road, over which we proudly hoped we would some day be running the Muskeg Limited on a fast schedule, but with the strenuous task ahead of us, and the obvious need for all the money we can command, why not be content to swallow our loss instead of throwing good money after bad?

If the Premier really wants to feel the pulse of the people on this subject, let him instruct the Finance Minister to offer the H. B. Railway as security for the next War Loan.

Chasing the Devil Around the Stump.

NEW BRUNSWICK doesn't register or license federally incorporated companies any more—it just taxes them.

The judgment of the Privy Council in the John Deere case put a serious kink in the acts by which not only New Brunswick but other provinces were attempting to legalize their levies on Dominion Companies. That judgment established the right of a company holding a Dominion charter to do business in every part of Canada, and denied the

right of any province to require it to become licensed or registered.

Alberta accepted the situation gracefully. Saskatchewan refused to concede a status to any company not incorporated under its own provincial act. New Brunswick seemingly bowed to the judgment of the King's Advisors, but made up its mind it wouldn't be baulked in attaining its real object, which, after all, was not so much to exercise a measure of control over extra provincial companies, as it was to get money out of them.

Accordingly it amends its Act so as to relieve Dominion Companies from any need of registering (note how obedient it is to the decree of the Court of Last Appeal), then it turns right round and imposes upon them a tax equal to the registration fee of which it has just relieved them.

Can New Brunswick get away with it? A province certainly has power to tax, but is the Companies Act the proper statute for enunciating measures of taxation? Is not the very fact that the Companies Act has to be cited as authority for this tax, an admission that it is a bare-faced attempt to circumvent the judgment of the Privy Council?

Our advice to Dominion companies doing business in New Brunswick is to resist payment of the tax. Let them call the bluff of the Attorney-General by telling him to enter action. If he takes a case to court he risks a declaration that his act is ultra vires; at best the court would probably defer judgment pending the outcome of the argument on the General Reference now before the Privy Council. And that wouldn't be good for New Brunswick's business. Much rather would it continue its present policy of boldly demanding and occasionally intimidating. Some intended victims may slip through the net, but there will still be a substantial catch.

"For ways that are dark and for tricks that are vain, the Heathen Chinee is peculiar," says Bret Harte. May be so, but he has some good imitators!

Finding Work for Returned Soldiers.

EVERY soldier who comes back to Canada after having done his bit at the front is certainly entitled to a job of some kind at remunerative wages. And as far as organization can do it, the job ought to be found for him, instead of him having to spend days and perhaps weeks looking for a job.

The Hospitals Commission, assisted by the various Soldiers' Aid Commissions, is undertaking to provide the necessary organization. It cannot hope to be successful unless it has the cordial co-operation of employers in every line of business, and in every part of the Dominion. The Canadian Manufacturers Association desires it to be known that the entire movement has its heartiest sympathy and its active support, and individual manufacturers are besought, not simply to give returned soldiers the first chance at openings as they occur, but if need be to make openings for their benefit.

A great deal of enthusiasm will probably characterize the initial efforts to obtain results and to get the system started, but unless we are greatly mistaken it will not be long before we hear of heart-burnings and recriminations.

The life to which the soldier has grown accustomed in the trenches, a life in the open with plenty of excitement, is not likely to be succeeded by one of routine indoor employment without giving rise to irksomeness and discontent. Already we have heard of several instances where soldiers have been provided with apparently suitable employment, only to fail altogether in reporting for duty or else throw up their jobs after a few days work.

Moreover, it frequently happens that a man who has been a magnificent soldier may turn out to be a very inferior workman. Some of the finest men in the ranks today were rated as trouble-makers or good-for-nothings before they took up soldiering. For the first time in their lives the war provided them with an occupation to which they were suited; once that occupation is gone a considerable percentage of them will sooner or later revert to their former status and become round pegs in square holes.

The Commission may assuredly count upon the whole-hearted support of employers in getting the returned soldier properly absorbed into our industrial system. But the Commission must not expect the impossible from those whose business will live or die according as their working forces are efficient or inefficient.

The Industrial Census of 1916.

IN business circles everywhere, one is constantly met with a desire for definite information as to the effect of the war on Canadian industry. We all know in a general way that in some lines production has increased, while in other lines it has fallen off, but the extent of the increase or decrease, even with regard to a particular trade, can only be a matter of surmise except perhaps to a limited few, while an intelligent understanding of the whole situation is something which none of us possesses.

It is important, however, for reasons of business, both individual and national, that we should have such an understanding, and by a happy coincidence we will have it before many more months have passed, for the Quinquennial Industrial Census falls due to be taken in 1916.

In reply to our enquiry, the Dominion Statistician informs us that by January 1st next, everything will be in readiness for a whirlwind census taking. Immediately after the first of the year every manufacturer in the Dominion will receive a schedule, calling for figures of capital employed, materials used, wages paid and goods produced during the calendar year 1915 or the nearest equivalent period. Three weeks will be allowed for the return of these schedules. The Census Act makes the furnishing of such data compulsory. Since it has to be given in any event, it may as well be given cheerfully and promptly, especially promptly, for in that event we are promised that the compilation will be completed and the

results announced in time to make the information of real value.

By the end of 1914 Canada had gotten over the first shock of the war. Confidence was beginning to return, and industry was beginning to accommodate itself to the new situation in which it found itself. A census covering the calendar year 1915, therefore, should reflect in their true light the industrial conditions for which the war has been responsible.

Towards the completion of this very necessary work Canadian manufacturers can best do their bit by giving the Dominion Statistician without delay the figures for which he asks. They have risen splendidly to the extraordinary demands for production that have recently been made of them; let them respond with equal readiness to this new demand, which is designed among other things to see that they receive full credit for their efforts to date!

Free Wheat.

NOW that a substantial portion of the wheat crop has been commandeered, the question of free wheat may be considered as disposed of, temporarily at least. The mere fact that the exigencies of the war rise superior to every other consideration, puts the free wheat advocate out of court for the time being.

But only for the time being. The unprecedented action just announced will not be accepted by him as any guarantee of good prices a year hence, after another crop has been harvested. By that time there may be no war, and consequently no extraordinary need to conserve our resources for the Empire's use. If so, we may look for a renewal of the agitation from the free trade element.

Ever since the Wilson Tariff became law the Western farmer has been demanding free wheat, and has told us very frankly why he wants it. We do not think he has always been quite consistent, for while at one time he claimed to want it in order to take advantage of the higher prices available in Minneapolis for his best wheat, at another time, when the spread between Minneapolis and Winnipeg had disappeared, he told us that what he was most concerned about was his market for off-grades. The impression created, however, was quite clear, and reminded one of the man in the song who said "I want what I want when I want it."

The Western farmer firmly believes, of course, that he would be greatly benefited were the duty to be taken off. On the other hand, there are those who would ask no greater favor at Fortune's hand than positive advance information of such governmental action in order that they might safely sell short on the Chicago market. One class or the other would surely be bitten. The question is, which? Nothing but a practical demonstration will ever really settle the matter.

One sure thing, the duty cannot come off as a permanent policy unless the Finance Minister is prepared to swallow himself. His Budget Speech of 1914 is conclusive on that point.

MAKING LEATHER FROM COTTON

Applying Science to Industry

ONE of the most striking illustrations of the application of science to industry is in the manufacture of artificial leather. Artificial leather is not the same thing as imitation leather, because it is entirely possible to manufacture paper which in color and general appearance closely imitates leather. Various wall papers are now manufactured which give the effect of leather on the wall, and in the manufacture of pocket books and other leather novelties, imitation leather paper is frequently used.

Artificial leather on the other hand not only successfully imitates the color and general appearance of the various standard kinds of leather, but also possesses most of the important qualities of leather, and in addition embodies some improvements over leather.

The fundamental basis with which the chemist starts in the manufacture of artificial leather is cotton. At first it may seem a far cry from this delicate vegetable fibre to the tough fleshy constituency of a tanned hide, but a careful analysis of the chemical product made from the cotton shows that to a remarkable extent it possesses properties almost identical with those of hide leather.

In the first place, the basis of all vegetable and animal growth is the cell. An animal's hide is made up of fleshy cells, and cotton is made up of vegetable cells. The chief constituent of vegetable cells is a compound known as cellulose, and the manufacture of artificial leather consists in the chemical treatment and physical manipulation of cellulose to give to it qualities similar to the combination of animal cells known as hide leather.

The Process.

In the manufacture of artificial leather the cotton is first treated with nitric and sulphuric acids and dried, after which it is known as nitrated cotton. This treatment renders it soluble in certain alcohols, ethers and other solvents. Such a solution has a consistency varying from that of a thin syrup to a thin jelly, depending on the amount of nitrated cotton per gallon of solvent. It is then called a pyroxylin solution. When this is spread on a strong woven fabric in machines constructed for the purpose, the solvent evaporates, leaving the pyroxylin jelly in a tough elastic film which adheres firmly to the cloth, being anchored to its surface by the microscopic filaments of cotton branching from the threads of the cloth. This process of coating is repeated a number of times, depending on the quality of artificial leather desired.

The grades that are employed for upholstering automobiles and furniture carry more and heavier coatings than those intended for book binding, pocket books, etc. Before the jelly is applied to the cloth it is dyed by the introduction of mineral and vegetable pigments to produce the desired color in the finished fabric. The coated cloth passes from the coating machine to the embossing machine, where it is embossed by steel rolls or plates engraved to represent the desired grain. The finished material is sold in 60-yard lengths, running from one yard to 54 inches in width. This enables the upholsterer to cut it with a minimum amount of waste.

Some Advantages.

The qualities of artificial leather which render it superior to the cheaper split leather are this factor of reduced waste in cutting, feasibility of cutting in multiples, uniformity of thickness and strength throughout, and the fact that it is waterproof, will not fade, nor will it crack or peel as easily as ordinary leather splits. The manufacturers guarantee the better grades of artificial leather for a year against cracking

or peeling. Such guarantees are not practicable with split leather, which is liable to crack, peel or tear while it is being tufted in upholstering.

The better grades of solid hide leather, not split, will stand more abrasive wear than artificial leather, hence artificial leather cannot be successfully used for such purposes as shoe soleing, nor for horse reins, both of which are made from sections of hides that have not been split. But the wearing qualities of ordinary coated split leather are not as good as those of the better grades of artificial leather.

It will be noted that the manufacture of artificial leather closely parallels the manufacture of split leather. Each process consists of coating a fabric with a surfacing material, and as a matter of fact, the surfacing material used for coating many leather splits is the same as that used for coating cloth in the artificial leather business. Both are embossed by machinery to imitate the desired natural grain, such as morocco, seal, alligator, walrus, etc. The chief points of difference are in the different texture of the fabric, one being animal and the other vegetable, with the advantages in favor of the woven fabric, and the coating, which is better in artificial leather than in natural leather.

Artificial leather has been used for many years in the furniture business and the better grades have proven a complete success. The tremendous production of automobiles, which were at first upholstered only in leather, has created such a scarcity of hides that the price of first-class splits has soared, while the prices of automobiles are being reduced. The result has been a gradual decline in the quality of splits used for upholstering automobiles until manufacturers have had to face the question of a change of upholstering material. Several of the largest concerns have already adopted artificial leather and all manufacturers of low-priced and medium-priced cars admit that they must do the same within the next two years.

WAR CONDITIONS HAVE BROUGHT THIS INDUSTRY.

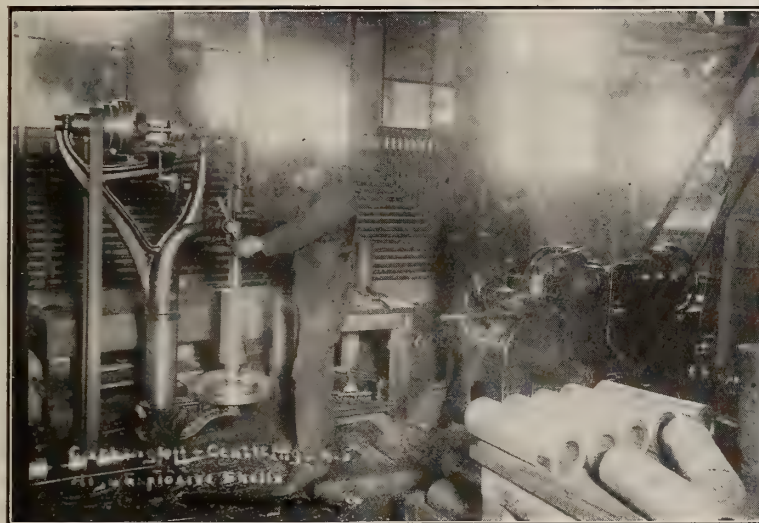
What a manufacturer can do under compulsion is splendidly illustrated by some samples of tapestries which have been shown to INDUSTRIAL CANADA, and which are now being manufactured in Canada for the first time. Hitherto high quality tapestries for furniture coverings, in verdure designs, were made in France and Germany. These sources of supply are now cut off. It rested with Canadians to get some other supply and they were successful.

Geo. H. Hees, Son & Co., Toronto, have succeeded in making, in their Valleyfield mills, a line of tapestries of excellent quality and design. Previous to this successful effort it was considered to be beyond the abilities of Canadians, with their limited facilities and market, to produce an article to compare with the European lines. So satisfactory, however, has been the present attempt that Geo. H. Hees & Co. have no difficulty in selling the entire output of their looms. The only difficulty which they now have to face is the problem of getting dyes.

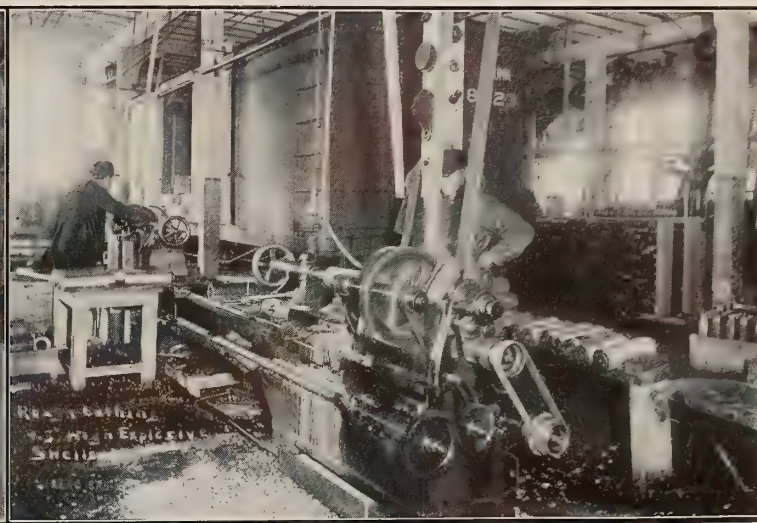
WHY NOT CANADIAN-MADE GOODS?

It is reported from the United States that, probably as a result of the disorganization of industry consequent upon the war, there is a considerable sale of United States manufactures of shirts and collars, of high grade quality, in Great Britain this year. Is there an opportunity for Canadian manufacturers here?

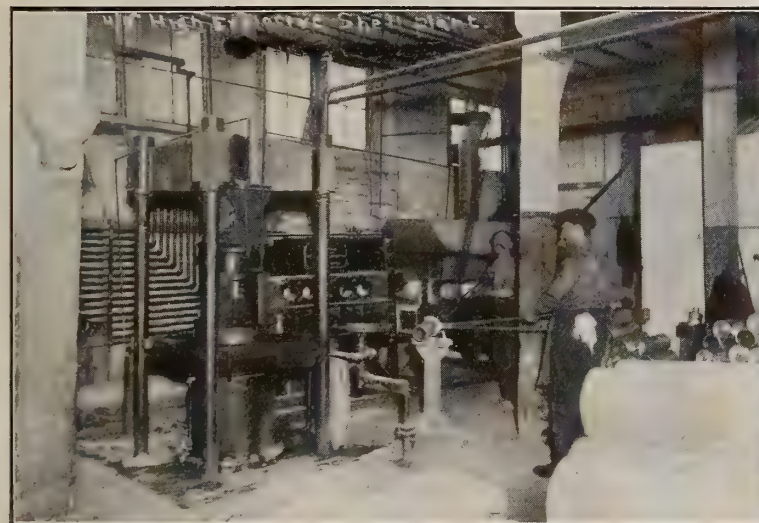
Organizing Canadian Factories for War



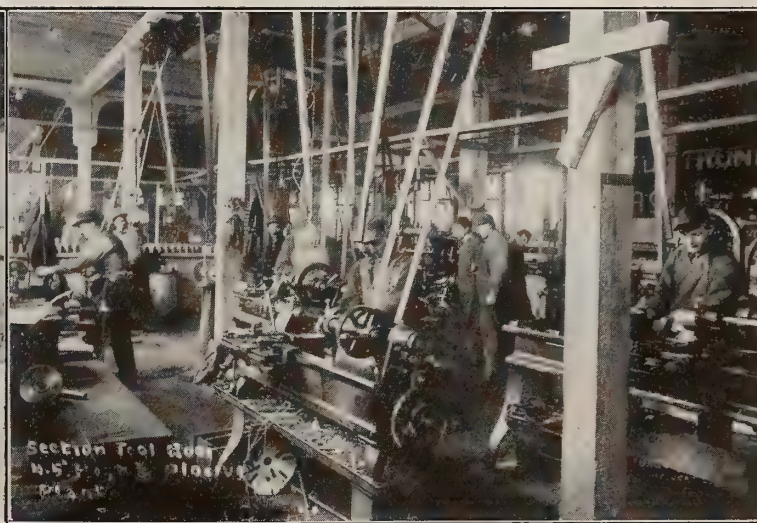
Cutting off and Centreing 4.5" High Explosive Shells



Rough Turning 4.5" High Explosive Shells



Heating Furnace and Nosing Press



Section Tool Room



Pressing Shrapnel Sockets



Pressing Copper Driving Bands on High Explosive Shells

In the Maritime Provinces great activity in shell making exists. The plants of the big metal working and engineering companies, with their complete organization, are adding to the supply of munitions which are necessary for the Allies

NEW LINES MANUFACTURED IN CANADA.

Nothing in the industrial experience of Canada is more noteworthy than the enterprise and ingenuity which have been displayed by manufacturers in meeting the home demand for goods which formerly came from Europe. In some cases the entire supply is cut off, as in the lines which formerly came from Germany and Austria. In other cases the British and French supplies have been greatly curtailed through the departure of workers to the war or to industries more vital to the immediate requirements of the war department.

The Toronto Carpet Manufacturing Co., Ltd., give INDUSTRIAL CANADA the following facts about new lines which they are making:

Axminster Squares and Piece Goods: This is practically a new industry in this country, but in the United States it has given employment to many thousands of hands. It enables us to offer a line of popular-priced Axminster carpets that is proving acceptable at the present time, owing to the difficulties in securing some grades of floor coverings that were formerly imported in large quantities.

Chenille Axminster: This quality is made seamless up to 12 feet in width, and is quite new to Canada. Rugs of exceptionally high quality can be made by this process, one of our latest contracts in this grade being the new Government House, Toronto.

Seamless Wilton: Our looms on these grades weave seamless goods up to 9 feet in width. These looms are the first machines of the kind in Canada and the product is so popular that we have found it necessary to work day and night shifts.

Rag Rugs in Colonial Style: This line of dainty rag rugs has sprung into immense popularity, and we have installed a complete plant for its manufacture. These rag rugs in artistic shades, with floral and plain borders, are being used very largely in home furnishings, and our new method of manufacturing from new cotton strips, has provided an article very acceptable from an economical, artistic and sanitary standpoint.

We also make quantities of knitting yarns, and this department has been working in double shifts to keep up with orders.

NEW MANUFACTURING COMPANIES.

Sherer-Gillett Co., Ltd., Toronto, Ont., extracts, spices, etc.; capital, \$50,000.

Dominion Magnesite Co., Ltd., Calumet, Que., machinery, implements, conveniences, provisions and things in connection with metallurgical operations; capital, \$100,000.

Dominion Copper Products Co., Ltd., Montreal, Que., Copper, brass, etc.; capital, \$400,000.

E. W. Jeffress, Ltd., Walkerville, Ont., manufacturing chemists; capital, \$40,000.

The Roxton Falls Mfg. Co., Ltd., Roxton Falls, Que., lead, copper, iron, etc.; capital, \$100,000.

Montreal Stone Specialties, Ltd., Montreal, Que., stone merchants and quarry masters; capital, \$50,000.

Lady Belle Shoe Co., Ltd., Berlin, Ont.; capital \$50,000.

The Eastern Machinery Co., Ltd., Montreal, Que.; capital, \$45,000.

The Canadian H. W. Gossard Co., Ltd., Toronto, Ont., corsets, garments, etc.; capital, \$125,000.

National Steel Products Co., Ltd., Toronto, Ont., munitions, explosives, military equipment; capital, \$100,000.

Lachance Nut Lock Co., Ltd., Montreal, Que.; capital, \$300,000.

Mayhew Hats, Ltd., Niagara Falls, Ont.; capital, \$75,000.

Neely Rotary Engine Co., of Canada, Ltd., Toronto, Ont.; capital, \$200,000.

Circle Bar Knitting Co., Ltd., Kincardine, Ont.; capital, \$50,000.

Castings Co. of Can., Ltd., Montreal, Que., manufacture, stamp and forge all kinds of steel; capital, \$49,000.

Electro Zinc Co., Ltd., Sherbrooke, Que., operate mines, smelters and refineries; capital, \$24,000.

The Canadian Dove-Smith Co., Ltd., Toronto, Ont., machinery, tools, gauges and parts of machines; munitions of war; capital, \$40,000.

The Ontario Aeroplane Co., Ltd., Toronto, Ont.; capital, \$200,000.

Gray-Dort Motors, Ltd., Chatham, Ont.; capital, \$500,000.

Manual Constructor Co., Ltd., Toronto, Ont., toys, playthings, articles intended to amuse instruct or entertain adults or children; light hardware of all descriptions from metal, wood, paper, celluloid, woodfibre, etc.; capital, \$40,000.

The St. Catharines Steel & Metal Co., Ltd., St. Catharines, Ont., machinery, tools, ammunition, etc.; capital, \$50,000.

Specialty Machine Co., Ltd., Toronto, Ont., iron foundries; mechanical engineers; manufacturers of munitions, specialties, tools, etc.; capital, \$150,000.

Canada Fishing Tackle Makers, Ltd., Trent River, Ont.; capital, \$40,000.

OPPORTUNITY TO EXHIBIT GOODS IN LONDON.

The London Fair and Market will be held as an International Exhibition in London from March 14th to 24th, 1916.

This exhibition is under the management of the International Trade Exhibitions, Limited, Broad Street House, London, E.C., to whom applications for space should be made. The exhibits will embrace sections devoted to fancy goods in all branches, china, glass and pottery, toys, games and sports goods, jewelry and silverware, fancy stationery, color printing, hardware in all its branches, musical instruments, furniture, etc.

The Royal Agricultural Hall and the Vase Building of Olympia, probably the two largest buildings in any city in the world, have been secured for the purpose of the London Fair, and the promoters state that applications for space are so great that it is probable that additional public buildings may be found necessary.

The London Fair will not be confined to manufacturers of British-made goods. It is intended to replace Leipzig Fair, which has contributed to a large extent to Germany's previous export trade. The promoters of the present Exhibition point out the large part which has been played by the concentration of a complete section of her manufactures as evidenced at the Leipzig Fair in Germany's commercial progress. The exhibits will represent all countries except those at war with Great Britain.

Full information in reference to this Exhibition is on file in INDUSTRIAL CANADA office, to which reference may be made by anyone interested.

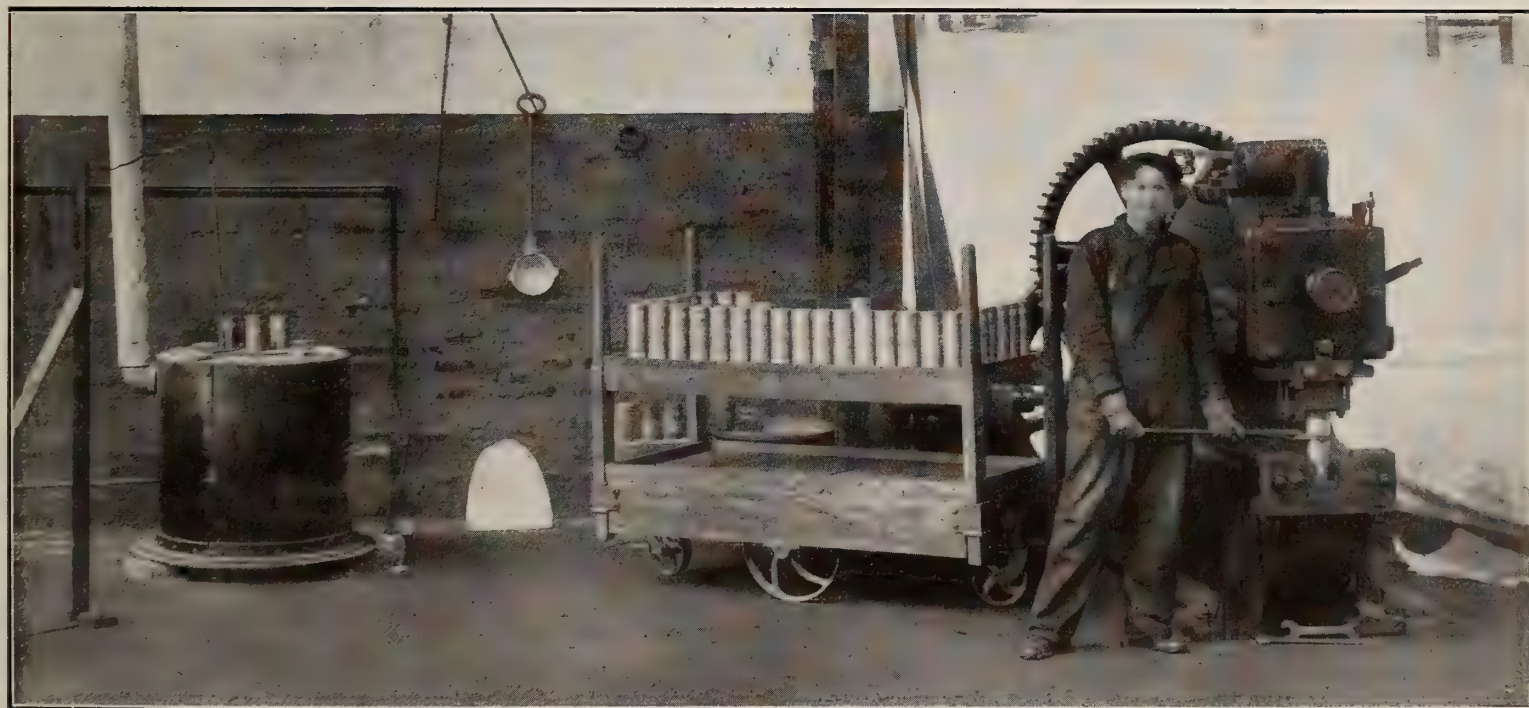
ARE WE LOSING OUR HOME MARKET?

A recent report from the United States Consul at Kingston calls attention to the large numbers of vacuum cleaners of American make which are displayed and sold in that district. We do not know how true this is of other parts of Canada, but it is certainly a condition which demands the careful attention of Canadian manufacturers. Vacuum cleaners are manufactured in Canada by several firms. If there is some quality or peculiarity about the foreign machines which gives them a preference in this market it should be possible to meet that condition. Perhaps the dealers in Kingston could give an explanation.

Organizing Canadian Factories for War



Keeping the Supply of Shells Satisfactory



The Firing Line is Fed with Canadian Munitions

Munition Factories in the Maritime Provinces are helping the cause of the Allies by a steady supply of shells. Some more illustrations of the work.

TRADE REPORTS INDICATE GENERAL ACTIVITY IN UNITED STATES

An Interesting Review of Trade Conditions

FRESH impetus to the forward movement is imparted by lower temperatures in many sections, which stimulate the demand for all classes of seasonable merchandise, notably clothing, footwear and fuel. As retail distribution quickens and broadens, wholesale departments in turn benefit and reports from all parts of the country are remarkably uniform in disclosing progressive improvement. Not only does business continue highly favorable in actual performance, but there is every promise, especially in industrial lines, of a degree of expansion limited only by facilities. These are being increased as rapidly as possible in iron and steel, yet, though more wheels are turning, there is not sufficient machinery running to keep pace with the rush of new orders, many of which extend far into 1916. Nothing in history parallels existing conditions in the great basic industry, while all of the minor metals, particularly copper, are more active, at advancing prices. Generally, manufacturing operations are on a steadily broadening scale—though the dyestuffs scarcity continues a handicap in textile production—and the effect of the additions to the working force is now more clearly apparent in strictly mercantile branches. One reflection of the greater ability and disposition of the people to purchase is seen in the enlarged sales of holiday goods, while it is also significant of the improved financial position of consumers that there is a growing demand for the more costly grades of merchandise. There would be less warrant for optimism if the business development were confined, as was formerly the case, to a few special lines in a restricted area of the country. But all of the statistical barometers tell the story of general progress. It is now not unusual to hear of railroads reporting the largest traffic movements in their history, and gross earnings of systems making returns for the first week of November were at the maximum for the period. Bank clearings continue to reflect the growth of trade volumes, there being a gain at outside centres this week of 29.8 per cent. over last year and of 17.8 per cent. over 1913; overseas commerce is still of remarkable proportions, while 89 advances and 21 declines occurred this week in the 322 wholesale commodity quotations regularly compiled by *Dun's Review*.

Trade Records Broken.

Ordinarily, figures make dry reading, but it is by this means that the magnitude of the overseas commerce movements can be most accurately measured. People are becoming more and more accustomed to remarkable achievements, yet the returns of export trade contain some really staggering totals. Last week, for example, merchandise shipments from the thirteen principal domestic customs districts disclosed a gain of nearly \$17,000,000 and attained a value of over \$81,000,000. This is a sum only once before exceeded; namely, by the \$99,000,000 shown in the week ended October 23. During the latest period reported there was a moderate growth in imports, but the so-called favorable trade balance was fully \$48,600,000. In view of the enormous excess of exports over imports, on the surface the current strength of foreign exchange seems rather incongruous. It is not difficult, however, to explain why rates of sterling are advancing. For one thing, the recent Anglo-French loan is now being freely drawn upon, while arrangements have been perfected for a supplementary London credit, estimated at \$150,000,000 to \$200,000,000. The latter, it is understood, is to be utilized solely for the purpose of maintaining the equilibrium of the

exchange market, and the effect of the announcement this week was seen in the rise in quotations to the highest level in over a month.

In the steel industry it is not a question of finding buyers. On the contrary, salesmen are no longer seeking orders because business is developing so fast that all of it cannot be handled. Though additions to plants are numerous, producers are unable to make deliveries as rapidly as desired, inability to obtain crude materials in some instances accentuating the congestion. In many cases the mills are booked to capacity for five and six months ahead, and there is no sign that the buying movement is slackening. Under the circumstances, further price advances are natural and there is no telling when the apex will be reached. Advices from the Pittsburgh district indicate notable activity in wire products, while sheet manufacturers are busier, and plants turning out boiler tubing are crowded with work. Notwithstanding the exceptionally heavy production, the output of crude steel is scarcely sufficient to meet requirements, so that premiums are more frequent. All grades of pig iron are tending upward under the stimulus of a substantial demand, while the situation in this department is reflected in the strength of scrap materials.

In nearly all textile lines, including silk, wool, cotton and jute products, prices are generally rising, and in some instances in a very remarkable way. But the volume of business continues full, the movement from mill centres heavy and all reports agree that trade in distributing and retail channels is improved. Dye scarcity is restricting production and increasing the cost greatly, while exports are hampered by inadequate shipping facilities and high freight and insurance rates. There is no abatement of activity in footwear, and some New England producers are of the opinion that more orders will be received during the coming winter than for several years past. An unprecedented demand is noted for kid shoes in women's styles, while retailers also report a marked improvement in men's kid shoes. Supplementary contracts for seasonable merchandise constitute a large proportion of the current business, with quick deliveries stipulated in all instances. Trade in shoe and belting leathers continues satisfactory and prices show an advancing tendency. All tanages of sole leather are in brisk request, with supplies meagre, while about all varieties of upper leather are more active.—*From Dun's Review.*

PROSPERITY IN THE EAST.

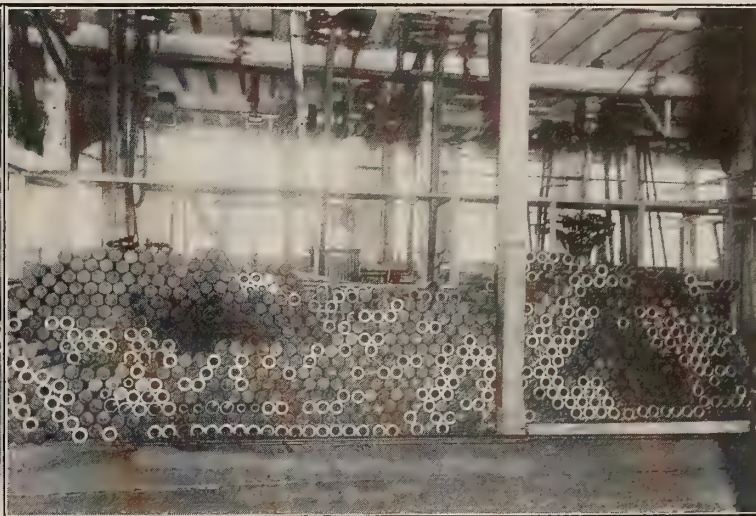
The trade benefit to Halifax from the construction of the new ocean terminals now going on is shown by the statement that the dock contractors are paying out in wages daily the sum of \$1,500 and the material consumed costs at least as much more. The right-of-way contractors building the line from the main track of the I. C. R. five miles to the terminals, spend \$1,000 a day, so that Halifax has the benefit of \$4,000 a day as the result of this huge undertaking. Then the billeting of troops in Halifax, as also in St. John, means considerable to current trade channels.

The Nova Scotia Steel & Coal Co., and its subsidiary, the Eastern Car Co., are paying out in wages at New Glasgow \$12,000 per day—by far the largest wage roll in the company's history. In Sydney also very large amounts are being paid out in wages by the steel and coal companies, and in Amherst big war orders are under way.

Organizing Canadian Factories for War



General View of Machine Shop



Shell Forgings with Ends Cut Off



The Finishing Operations

PRINCE RUPERT'S BIG DRY DOCK COMPLETED.

The official test of the dry dock and ship-repair plant at Prince Rupert has been made, and it has been pronounced ready for work. This plant was built by the Grand Trunk Pacific Railway.

The completed plant consists of a 20,000-ton floating dry dock, the second largest on this continent; carpenter shop; shipbuilding shed and launching platform; machine shop; boiler and blacksmith shop and foundry. There is also a concrete power house, with boilers of 2,400 horsepower, and two

1,000-kilowatt turbo-generators, together with an air compressor having a capacity of 1,500 cubic feet per minute.

The floating dry dock is made up of three parts, which will fit together in any combination, or may be operated separately and at the same time. By a special link-and-pin device, any pontoon is easily removable for examination or repair.

A steel derrick, capable of lifting 50 tons, is installed for the purpose of handling heavy lifts into and out of ships, and is used as well for handling heavy commercial freight for the railway. Travelling cranes are installed in all the shops as well as in the power house.

WILL CANADIAN MANUFACTURERS ENTER RUSSIAN MARKET

Special Report by Trade Commissioner C. F. Just

Trade Methods of Competing Countries.

GERMANY, Great Britain and the United States, in the order named, being the principal countries from which Russia derives her imports, it is of interest to note the methods used by each to capture the trade of that market.

Germany.

German manufacturers, after due trial, have abandoned the practice of establishing branch houses in Russia; it proved unprofitable. They subsequently took up and developed the intensive working of the market with travellers, who covered not only the chief cities like Petrograd, Moscow, Riga, Kieff, Odessa, Rostov-on-Don, etc., but also the larger provincial towns. These travellers carried elaborate collections of samples of a wide range of articles, representing often different industries, and, above all, catalogues printed in Russian with prices set out in Russian values. They quoted f.o.b. Russian port or a Russian frontier station, and were ready to meet the provincial wholesale dealer and the local stores by quoting similar terms with duty paid, and if pressed, including delivery at the local station. As a further accommodation they conceded extended credits to suit the individual customer with the support of the German banks. German success in Russia was much helped by their ability to supply cheap articles for a market consisting so largely of a peasant population, who are anything but fastidious. Moreover they were also able by the circumstances of their competition and the clever adaptation of business methods to secure gradually the Russian market for better class articles.

Great Britain.

Twenty years ago Great Britain practically monopolized the Russian market in manufactured articles, but she has since been overtaken by Germany owing to the disinclination to allow the long credits given by that country. Ultra-conservative methods of business and unwillingness to quote in Russian currency and weights and measures, or to follow the German example of quoting delivery at frontier with duty paid, hampered progress. It is said that the use of travellers in order to keep in touch with customers was neglected, and that British manufacturers declined to entrust their interest to export merchant houses. Thus the direct business became limited to the largest dealers in the Russian centres, and it might be said that the business Great Britain was doing in Russia until recently was due largely to the fact that British goods were actually demanded by customers, and not to their being actively pushed. Evidences of a salutary change in this regard are now at hand. That British trade with Russia is still as large as it is, should be taken as a tribute to the intrinsic excellence of the goods supplied.

United States.

The methods employed hitherto by United States manufacturers have been one of the two following:—

Either to appoint a sole selling agent for Russia and Siberia, or to entrust their export trade to exporting merchant houses in the United States and Hamburg, this second method appearing to be most in favor. United States manufacturers have obtained better results with the Hamburg firms than with those in the United States, as the former worked Russia

somewhat intensively with travellers along the German lines indicated above. For the American house thus relieved of Russian credit risks the business was easy and convenient, but it was necessarily of restricted proportions, the growth of which the manufacturer could not influence. Moreover, the advantage was not derived of the high prices obtained in Russia. The chief concern of the German firm was to give his Russian customer a wide choice of goods from all countries, as this ensured sales, and therefore he had no special reason to push the articles of any particular firm. Like his English colleague, the United States manufacturer was opposed to the granting of long credits and as a consequence the market was left to the German, who constantly improved his position.

The Alternatives for Canada.

Having regard to these facts, and in view of the new position that has arisen whereby German competition has been largely eliminated, it is of interest to inquire into the possible methods open to Canadian manufacturers proposing to share in Russian trade. They may be stated as follows:—

1. By correspondence. Business may be done in this way, but it can hardly be recommended as satisfactory. Correspondence would have to be in Russian or French, catalogues printed in Russian would be indispensable, but prices in roubles c.i.f. Russian port or on railway car, i.e., including sea freight and duty.

2. Through export merchant houses, Canadian, American or English. Business may be obtained in this way, the advantage to the manufacturer being that he takes no credit risks. This disadvantage on the other hand lies in the higher price, which is quoted to the Russian wholesaler, and the fact that the export house, as a rule, represents more than one manufacturer making the same articles, and is thus not particularly interested in any one manufacturer. This plan of action is only of interest to the manufacturer, who has no particular aim in increasing his Russian business and who wishes to avoid the risks and trouble, which a more profitable but direct business would involve.

3. By appointing Russian firms, or available local British firms as agents. This is undoubtedly a much more satisfactory plan than the export house. First, because the prices to wholesalers will be less, and consequently the volume of business will be greater, provided always a solvent, energetic firm of agents be found. Agents are of two kinds:—

(a) Those who work on a commission basis, some of whom are ready to undertake a full or partial guarantee of accounts for a corresponding additional commission.

(b) Merchants doing a wholesale business who take the financial risk and quote such prices as they think necessary.

There are many such agents in Russia. Before the war, the majority of the more desirable already represented manufacturers and were not free. It is believed that now the difficulty of securing suitable representatives may be overcome, although a great many of the best agents, who were of German nationality, have left the country.

4. A resident representative of grouped industries, co-related but not inter-competitive, or of industries making similar articles, but agreeing to pool orders for the Russian market. The employment of a trusted Canadian representative equipped with a technical knowledge and business experience of the articles he is to introduce, offers perhaps the most

satisfactory solution of the problem. While the initial expenditure for such a representative would be large, by being shared it would fall lightly on the individual firms interested. After the arrangements for agencies in the centres had been made, and were in working order, a periodical supervision at longer or shorter intervals should then suffice. There are two examples of this method in Russia which are working satisfactorily, one American and the other British. The former represents a combination of hardware and tool manufacturers for export, which included at the outset twenty firms, and has since been increased to sixty-two co-related firms. The organization is financed by a prominent New York banking house, to whom all payments by their agents in Russia are made. A representative visits annually the fifteen centres at which the combine maintain their agents, who are mainly merchant houses buying on open account and not on commission. The British concern referred to handles, in addition, general machinery, and maintains their own local representatives, who are Russian-speaking Englishmen having a technical knowledge of engineering.

Distribution of Foreign Imports.

The distribution of foreign imports into Russia is entirely in the hands of two or three classes of wholesale merchant houses, all of which are grouped in a few of the chief cities such as Petrograd, Moscow, Riga, Kieff, Odessa, Rostov-on-Don, etc. Moscow is pre-eminent as a centre of this character, and it is hardly an exaggeration to say that nearly fifty per cent. of Russian foreign imports are handled directly or indirectly through that point. The general character of the imports handled by Moscow are of a class which appeals to a peasant market and are represented by the cheaper qualities as against the business transacted from Petrograd, where the trade is of high standard and where Government purchases and contracts are exclusively settled for the whole Empire. In the first instance, there are then in these large cities wholesale merchant houses, which employ travellers who work the surrounding provinces. The orders as received are combined and transferred to the foreign manufacturers concerned, the merchants themselves carrying very little stock. Wholesale houses in the provinces are few in number and of relatively small account. The wholesale dealers referred to, sell direct to the provincial retailers. The selling firms in question belong to the class which offers exclusively the goods of the foreign manufacturers they represent.

Another class of wholesalers have no travellers, and rely upon catalogues; they have their regular clientele throughout the provinces, mainly retailers, who effect their purchases by correspondence or in person, when they visit the various centres.

A few other firms have their branch houses in different towns in Russia, which send out travellers in their respective districts to deal direct with users, but these firms specialize as a rule in a few lines. All wholesalers do a large retail trade with users of goods, such as factories, railways, etc.

Travellers for the provinces carry ample collections of samples, together with catalogues. Their catalogues are of two kinds; some houses issue only a retail catalogue and sell at these prices, less a certain discount; whereas others publish and issue a wholesale catalogue only at net prices to provincial dealers, these wholesale catalogues being restricted to the trade.

As regards foreign goods for Siberia, the trade is controlled largely by Moscow firms, who send out travellers to the main points only, if at all, and usually have one sub-agent or buyer stationed at Omsk, which is the chief centre for Western Siberia. The rapid development of Siberia, however, is leading to the establishment of independent local wholesale houses of undeniable financial strength which do both a

wholesale and a retail trade, and deal direct with foreign manufacturers without intermediaries in Moscow; this is a factor to be duly noted and catered for.

The Far Eastern business, namely in the Trans-Baikal and the Amur region, is in the hands of a few large firms with headquarters at Vladivostok. It is quite a specialized business, and not touched by the ordinary Russian houses. These firms do a large trade with their magnificent stores and well-organized wholesale departments, sending out travellers who cover the whole of the Far East. Two of the largest, Messrs. Kunst and Albers and Messrs. Tohurin & Co., have each a purchasing house in Moscow, and the former also a house in London. It is advisable that Canadian manufacturers on the grouped plan should be represented in Vladivostok.

Credits—Conditions of Payment.

In Russian dealings the question of credits is of great importance and calls for careful investigation. The Russian wholesaler is compelled to allow his customer credit in practically all lines. This credit period varies and may extend up to twelve months. A cash payment c.o.d. of say up to twenty-five or thirty per cent. is the general rule. In most cases, however, the wholesaler is satisfied if his client will pay railway freight and expenses to destination, although he usually tries to insist on a c.o.d. payment to cover his own outlay for sea freight and duty. For this reason Canadian manufacturers should be prepared to grant liberal credits to dealers in order to do business, say for seventy-five per cent. of the cost at factory. They should endeavor to sell f.o.b. Canadian or United States port, to which dealers will generally agree, the dealers paying freight, insurance, etc. For the balance in question it will be found that credit should be given for three, six, nine or twelve months, according to the article and the respective customer. Thus the foreign manufacturer is asked to help to carry trade, for the majority of the wholesale dealers have not sufficient capital to pay for their imports until the ultimate users of these goods, in the main the peasant consumer, is able to discharge his obligations to the retailer, which he can only do after the gathering of his crops. As has been seen, the German houses were assisted by the co-operation of the banks in meeting the situation. Careful investigation of the credit position of wholesalers is therefore of unusual importance, even in the case of the large buyers. In this connection, the position of Jewish firms should receive attention, having regard to the special disabilities under which members of that race labor in many respects in Russia. Jewish firms, however, are to be found more in Western Russia at points like Odessa, Kiev, Warsaw, etc., rather than in the interior of Russia. It should be observed also that the commercial law in Russia is still in a formative stage; the recovery of debts is surrounded with difficulties, and procedure in the Russian courts, while just and sure, is slow, but a good deal is, and may be effected by tactful pressure and compromise. An excellent bankruptcy Act has been framed and agreed upon, and will undoubtedly be very soon placed upon the statute-book. On the other hand, sales made on the plan of payment by instalments are to be considered safe, and are generally adopted in cases of transactions for machinery, etc., which remain the property of the vendor until the last cent has been paid.

The building up of an export trade is at best a slow process, and new-comers in a market like that of Russia will have to proceed warily and restrain their optimism. But there is no question that with ordinary caution and judgment it should be possible for them to make solid connections, and develop gradually a staple and profitable business in the Russian market in some of the very many lines of supplies which are indispensable to the Russian people.—*From Trade and Commerce Bulletin.*

A CREED FOR BUSINESS MEN.

A new business man's creed has been adopted by the Rotary Clubs of America, as follows:

My business standards shall have in them a note of sympathy for our common humanity. My business dealings, ambitions and relations shall always cause me to take into consideration my highest duties as a member of society. In every position in business life, in every responsibility that comes before me, my chief thought shall be to fill that responsibility and discharge that duty so when I have ended each of them, I shall have lifted the level of human ideals and achievements a little higher than I found them. In view of this your committee holds that fundamental in a code of trade ethics for International Rotary are the following principles:

First: To consider my vocation worthy, and as affording me distinct opportunity to serve society.

Second: To improve myself, increase my efficiency and enlarge my service, and by so doing attest my faith in the fundamental principle of Rotary, that he profits most who serves best.

Third: To realize that I am a business man and ambitious to succeed; but that I am first an ethical man, and wish no success that is not founded on the highest justice and morality.

Fourth: To hold that the exchange of my goods, my service and my ideas for profit is legitimate and ethical, provided that all parties in the exchange are benefited thereby.

Fifth: To use my best endeavors to elevate the standards of the vocation in which I am engaged, and so to conduct my affairs that others in my vocation may find it wise, profitable and conducive to happiness to emulate my example.

Sixth: To conduct my business in such a manner that I may give a perfect service equal to or even better than my competitor, and when in doubt to give added service beyond the strict measure of debt or obligation.

Seventh: To understand that one of the greatest assets of a professional or of a business man is his friends and that any advantage gained by reason of friendship is eminently ethical and proper.

Eighth: To hold that true friends demand nothing of one another and that any abuse of the confidences of friendship for profit is foreign to the spirit of Rotary, and in violation of its Code of Ethics.

Ninth: To consider no personal success legitimate or ethical which is secured by taking unfair advantage of certain opportunities in the social order that are absolutely denied others, nor will I take advantage of opportunities to achieve material success that others will not take because of the questionable morality involved.

Tenth: To be not more obligated to a Brother Rotarian than I am to every other man in human society; because the genius of Rotary is not in its competition, but in its co-operation; for provincialism can never have a place in an institution like Rotary, and Rotarians assert that Human Rights are not confined to Rotary Clubs, but are as deep and as broad as the race itself; and for these high purposes does Rotary exist to educate all men and all institutions.

Eleventh: Finally, believing in the universality of the Golden Rule, *All things whatsoever ye would that men should do unto you, do ye even so unto them*, we contend that Society best holds together when equal opportunity is accorded all men in the natural resources of this planet.

CATALOGUE RECEIVED.

A catalogue has been received from L'Air Liquide Society, Montreal, descriptive of the Oxy-Acetylene welding and cutting apparatus manufactured by that company.



CAPT. J. M. McINTOSH

Secretary, Toronto Branch, Canadian Manufacturers Association
Now on Overseas Service

PRESENTATION TO CAPT. McINTOSH.

Preceding his departure for Brandon, to take up his duties as Adjutant of the 79th Overseas Battalion, Capt. J. M. McIntosh was presented with a wrist watch and a case of pipes by the Executive Committee of the Toronto Branch, C.M.A.

Mr. Coulter, of the Booth Coulter Copper and Brass Co., Ltd., chairman of the Toronto Branch, made the presentation. He referred to the excellent service which Capt. McIntosh had given to the association, and to the regret that the members felt at the temporary loss of his assistance. He extended the hearty wishes of the association for the secretary's welfare in his military work and hoped that in the not far-distant future he would be back to resume his work.

Mr. J. P. Murray and Mr. L. L. Anthes also represented the Executive Committee at the presentation.

SUPPLIES FOR AUSTRALIAN NAVAL DOCKYARD.

From a letter received from Mr. D. H. Ross, Melbourne, says the Weekly Bulletin of the Department of Trade and Commerce, it would appear that the Department now intimates that delivery of the machine tools, in connection with the Commonwealth Naval Dockyard Power Plant Equipment for Cockatoo Dock, Sydney (to which reference was made in Weekly Bulletins Nos. 602 and 608) will be required to be made free on wharf, Cockatoo Island (that is Sydney Harbour). Canadian firms tendering should make note of the above.

AIR COMPRESSOR FOR SALE.

FOR SALE.—Ingersoll-Rand, Class NE-1, power driven single stage straight line Air Compressor, close connected for belt drive to motor. Piston diameter 12 inches. Piston displacement 258 cubic feet per minute. Designed for pressure, minimum 35, maximum 55, lbs. per square inch. Length 7' 6". Width 3'. Height 4' 3". Been used for four weeks only.

WHAT'S THE USE OF A COST SYSTEM?

By E. A. BAKER

Vice-President and Assistant General Manager, Rathbone, Sard and Company, in "Factory"

Are your cost reports merely columns of figures neatly drawn up on which you mechanically put your initials once a month after noting the ups and downs, or do they stir you to immediate action? Are they a means of control with you? "Too many cost methods are like merry-go-rounds; they leave you where you start," Mr. Baker says in this article here reproduced from the "Library of Factory Management." He points out the management value of cost figures and how to use them not to whirl a business in a circle, but to advance it.

COST-FINDING methods sometimes seem to be based on the idea that if only enough detailed information can be gathered, and this information scattered broadcast through the organization, a fine crop of efficiency can be grown. Efficiency, however, is not a vegetable to be grown. It is a metal which has to be mined or blasted from the solid rock of yesterday's and to-day's common practice.

In operation some cost methods remind one of a ride in a merry-go-round. They mount a hobby-horse, in a period of dizzy exhilaration; figures flit by in bewildering profusion; the music stops and they alight exactly where they started. They have not advanced the factory a foot, a day, or an idea.

Of what use are mere figures? When asked this question, an accountant will offer to prove his statistics by actual inventories and balances. He knows his mathematics are correct. No doubt they are. The question, therefore, may be amplified. Of what use are figures when they are merely correct? Do they say anything? Do they point anywhere? Do they stir the manager to action like a fire alarm?

Figures must, of course, be correct, but merely being correct is not enough. They should also be a motion picture of the happenings throughout the plant. This picture should portray actual conditions as they are to-day, not as they were yesterday or last year, and in such a manner that the executive, by means of conclusions unmistakably pointed, can get actual, concrete results.

Cost schemes in many factories merely subdivide the total outlay among the various styles, classes or units of product. Cost that tells the executive where he is losing money and why, or that point definitely to cost-cutting, hence profit-increasing possibilities—are few and far between. A cost system, to be worthy of the name, not only must yield figures upon which reliable estimates can be built, and profitable sale prices based, but it must also give close control over all the activities of the factory.

While cost systems in general are subject to a number of weaknesses against which the executive must be on his guard, these three errors in using cost figures are of prime importance: (1) the use of an arbitrary or approximate expense ratio, or one based on conditions which no longer exist; (2) too much detail in the periodical, weekly or monthly cost reports which go to the manager; and (3) the tabulation of a high cost on some favorite article or operation.

To keep track of current expense properly and to distribute it accurately is admittedly difficult. Accordingly the tendency, following the line of least resistance, is to use whatever expense ratio is available. Last year's expense, for instance, is frequently employed as a basis for figuring this year's costs. The result is not a cost, but a guess, and when it comes to guessing, the manager is a far better guesser than a clerk, and, therefore, a good deal cheaper.

Using even the current monthly expense ratio in going after sales is a questionable practice. For the ratio is bound to fluctuate from month to month, and if orders are taken on the basis of a low month, when a high month comes along orders taken at the same price will show a loss which may not be offset. The cumulative period percentage is the only safe one to follow, and the last one to-date is the right one to use as a basis for the current month's sales. In a seasonable business, the period would cover the different seasons. Where manufacture is practically continuous throughout the year, the period necessarily would be one year.

A complication arises when business depressions are encountered. Then the factory may operate at half capacity or even under. If all the current expense is charged into current cost, and the selling prices are adjusted accordingly, they will be so high that no business at all can be secured. Either the price must be cut to a point where a fair share of the obtainable business can be landed, or the plant closed down

HOW TO STANDARDIZE THE ELEMENTS OF COST

MATERIAL

1. Insure uniform quality by purchasing to specification and tests.
2. Establish by tests proper quantity of material to be used. Keep close tab on actual consumption and exert pressure constantly to make the two conform.
3. Closely control issuance; require strict accounting for all materials used.
4. Improve processing methods so as to reduce wastage to a minimum.
5. Give bonuses for high percentages of good product.
6. Charge all preventable waste and spoilage into expense.

LABOR

1. Set accurate piece rates, based on standardized methods and standard times.
2. Set bonus on premium rates as above. Establish standard unit cost, charging excess into expense.
3. Set quotas of work, handle discrepancy in costs through expense.
4. Place cost estimate on all operations, rate men accordingly. Handle discrepancy through expense.

EXPENSE

1. Supervision—careful selection and training of men; inducements that make them stay; these reduce amount of supervision necessary.
2. Inspection—pay for good product only, make each man check on the preceding, instruct men in proper methods.
3. Clerks—centralize, use mechanical devices to replace clerks wherever possible.
4. General labor—set tasks, supervise closely.
5. Maintenance and repair labor—anticipate repairs—estimate and schedule all jobs.
6. Power, heat and light—measure, set limits, hold supervisor to account for economy.
7. Supplies—set standards of consumption, control issuance closely, gage supervisors by savings.
8. Fixed charges—more intensive use of space and equipment, more hours of work, redoubled sales effort to bridge slack periods.
9. Spoilage—rigid inspection, systematic instruction, improvement of equipment, rewards for high percentages of good work.
10. Waste—watch closely, investigate to find ways of reducing; sort, reclaim, sell by-products.

altogether. There is always a certain portion of overhead expense accruing in a plant, whether it is operating or not.

This expense remains the same whether the volume of business done is large or small, and in times of business depressions, where the factory is not operating nearly to the full capacity, it is unfair to saddle the individual product with the total expense. This total expense should be known and reported, to be used from a control point of view, but the expense should be based upon a normal production, and the difference between this expense applied to costs, and the actual expense incurred should be charged against profit and loss, and not applied against sales. In the same manner, in exceptional business times, when expense ratios are very low, costs should not be figured on the basis of the actual period ratio, but upon the normal operating basis, and the difference applied to profit and loss account. The expense ratio is a measuring stick, but in using it to distribute expenses against costs for periods under consideration, rare business skill is essential.

So, at all times, if the manager wants his costs to stand up and talk to him, and talk convincingly, they must have facts behind them, and he must interpret these facts broadly. Expense facts covering some forgotten period will never control to-day's operations. Even to-day's facts may not be used narrowly. Use of costs, no less than calculation of costs, is an art.

Cost Reports Must Be Free From Distracting Detail.

As to the second weakness, costs, to get results must walk up to the executive's desk and tell their main story free of distracting detail. Brevity, conciseness, and logical order are essential. Masses of figures which compel the executive to spend hours in analysis before he can reach conclusions, are expensive, tiresome and soon fail to suggest methods of control. When a cost report bores a manager, something is wrong with it. It should be as interesting as an up-to-date play. Then the manager will stay down at the office during the evening to look it over.

If a private detective were to tell a factory superintendent

that the cost of finishing "A" grade of goods increased last week about two hundred per cent. because a large number of the men attended the world series games, the superintendent would open his eyes in amazement. If a cost report tells him the same bit of news in the same startling and convincing way, he will be equally attentive.

Too long has the old assumption been cherished that a cost report must necessarily be a lengthy display of tabulated figures. Costs are figured, but their chief value lies in their relation to other figures. It is by comparisons and totals that managers form judgments. Yet even comparisons lose their force if they are too detailed. In a certain factory at one time more than twenty thousand different job numbers were recorded in the cost reports. No practical use was ever made of this information. There was such a profusion of detail that the company was simply buried under it. Final reports, giving the boiled-down essence of the whole, never reached the manager's desk. If he desired any information he had to glean it tediously from the voluminous and intricate records of twenty thousand jobs.

This is a mistake. What the up-to-date manufacturer wants is a commercially correct cost obtained in a practical manner. Such a cost he can use to advantage in controlling his business day by day. Often graphic charts which portray the fluctuation and trend of costs in each department are more satisfactory than whole tables of figures. The executive sees instantly whether costs have gone up or down, and why. He immediately starts to strengthen the weak spots. Not until then does he need to summon the mass of details which lie back of the perspective.

Cost standards may admittedly be established by direct analysis, but if the manager has his cost data before him in proper form he can then better appreciate the weak points instantly when they are brought to his attention; more, he can take the lead in the work of setting up cost standards, and no one should be able to judge so well as he the proper order of procedure.

Favoritism is the third weakness in the use of costs. There is scarcely a manufacturer who has not found himself at one time or another making excuses or allowances for permitting a high cost on some favorite article or operation.

A manufacturer recently was shown that he was producing a certain article at a heavy cost. He refused to discontinue its manufacture because he had made his reputation and most of his money on it. Changing conditions, however, made a loss unavoidable. Yet he made all manner of excuses, apologies and allowances, until the loss in question seriously threatened the existence of his business. Then, and not until then, was the drag cut loose, and the business brought about and put on a paying basis.

The Wise Manager Uses His Costs to Better Conditions.

Some managers dislike cost figures which do not support their preconceived views. But no purpose is served by ignoring positive, probable cost returns. The part of wisdom lies in accepting

HOW THE STANDARDIZING RULES WORK OUT

WITH MODIFIED DAY WORK.

OFTEN it is possible to standardize the labor cost and still retain day work instead of going to the piecework plan. At the Hart-Parr plant, for example, basic costs have been determined on many of the operations. This cost is placed on the work orders. The workman then figures his time allowance in accordance. Thus, if the cost set is seventy-two cents and a man's hourly rate is twenty-four cents, he knows at once that he is supposed to do the work in three hours.

An efficiency record is maintained on each man. He is credited with the amount he beats the cost estimate on each job and debited with the amount he exceeds it. Monthly a balance is struck, and if his credits exceed his debits, he is due for a raise in his hourly rate.

WITH VARYING PIECE RATES.

EXCESS cost due to inadequacy of equipment is a common complication. Varying piece rates are sometimes necessary on the same operation, when it is done on different machines. The lowest or best rate is the one to take as the direct labor cost. The difference between this rate and the other rates is a legitimate expense item. Appearing in the cost reports, it makes a definite impression on the manager and, if large, he can at once investigate to determine whether or not an investment in new and up-to-date equipment will be justified.

IN REDUCING SPOILAGE.

A WISCONSIN ironware company had been accepting as normal a ten per cent. foundry loss. The fact that careful moulders regularly kept their loss within five per cent., while others exceeded ten, indicated the need for standardization. Measures were accordingly instituted to raise the standards of workmanship.

A bonus scheme was inaugurated whereby moulders making a perfect record any month received a bonus of twenty-five per cent. of their total monthly earnings; those registering ninety-nine per cent., a bonus of ten per cent.; and ninety-eight per cent., a bonus of five per cent. In addition, those exceeding ninety-five per cent. had their names bulletined on an honor roll. The co-operation of the foremen was also enlisted by paying them a percentage of the bonuses earned by their men. One man hit the bull's eye the first month, and ten or fifteen got public mention.

The men, of course, were given every opportunity to state their case and many times the fault for spoiled work was shown to be beyond their control. Recurrent fault not due to the man were promptly investigated and remedied as far as possible. Not until the worst of them had been corrected was a real leverage obtained on the percentage of loss. Then it began slowly to go down.

the discouraging costs, and then setting about to remedy the conditions which are responsible.

Not long ago an engineer was talking with a manufacturer about his costs. Though over two hundred different articles were made, costs were obtained strictly on an average basis. The engineer pointed out that although the books showed a fair profit on the whole volume of business, undoubtedly some of the two hundred articles were being produced at a loss. The manufacturer replied that such might be the case. The engineer then asked him if it would not be a benefit from the control point of view to know the exact cost of the different lines.

"If I did know," was the answer, "there would be certain lines I could not sell." Surprised at the remark, the engineer asked why.

"Every article I produce now I am selling at a profit. I would not sell goods below cost."

This seems a strange process of reasoning. Yet, there are many who deliberately deceive themselves by similar logic, and seem to take pleasure in so doing.

It is a mistaken idea to believe that because a company is making money in total, it is making money in detail or even on its most profitable lines, that it is making all the money it can. In almost every manufacturing plant certain lines of

goods will show a good margin of profit, while others will show little or none. Let the truth be known. The more accurate the figures, the better the business may be controlled. Measures may then be taken to reduce the cost of the unprofitable lines so that the company is justified in continuing to produce them. If some lines cannot be cheapened, then it becomes a matter of policy whether orders will continue to be solicited and accepted for them.

All this leads to the heart of the whole matter. If costs are to control, they must be controlled. This means the pre-determination of costs wherever possible. Material costs can be controlled by eliminating spoiled work, waste and other losses, but the information pointing out these losses must still come in the cost report. The labor cost can be controlled by determining proper work standards and fitting men carefully to the work. And the cost reports are an important aid to this end. The proportion of expense to labor can be controlled if sufficient detailed information is provided, and upon this basis standards of expense are set.

So, in general, a cost system can only produce results when it brings the executive such comparative information as enables him to standardize and intelligently direct improvement in his business. That is control.



Marine War Losses.

CARGOES lost so far in the war have been valued at \$37,000,000, according to figures prepared by the British War Risks Association, and represent a loss ratio of less than one-half of one per cent. of the cargoes insured. Insurance rates have been in the neighborhood of three-fourths of one per cent., so that the association has realized a profit despite its heavy loss.

October Fire Loss.

According to the estimate compiled by the *Monetary Times*, the total fire loss throughout Canada during the month of October amounted to \$1,258,325, as compared with the September loss of \$1,116,109 and \$1,326,565 for October of last year. This brings the total fire loss of Canada for the ten months of 1915 to \$10,895,192 approximately, half the losses of October were accounted for by no more than three fires—at Lachine, Stanstead, P.Q., and Midland, Ontario—the damage done in each case being about \$200,000.

Practical Fire Prevention.

One way of impressing upon employees in factories and other establishments the importance of eliminating the fire hazard due to or accompanying smoking, is well set forth in the following form of notice, which is suggested by the Kansas Inspection and Fire Prevention Office: "No Smoking Allowed: A Fire Would Put Every Man in This Plant Out of a Job." That shows just how an employee and his family would suffer because of a fire caused by some one's carelessness, and ought to convert every employee into an active worker for fire prevention.

Lightning Rods Effective.

Reports received from over the state by the State Fire Marshal of Kansas show that lightning rods are a very effective protection. During July, fifty lightning fires were reported.

Virtually all in farm buildings. Only one building was rodged. The other forty-nine were without rods. About one-fourth of the farm buildings in Kansas are rodged. These statistics are verified by those of other months and years, and by the reports of the fire marshals of other States. Take the country over, on an average only about two per cent. of lightning fires are in rodged buildings.

The Fire Demon.

The National Motion Pictures Co. has produced, in collaboration with the National Fire Protection Association, a film, entitled "The Fire Demon," designed for the education of the public on the subject of fire prevention. The film is about one thousand feet in length, and depicts a series of incidents illustrative of many common acts of carelessness which may result in disaster. Each incident ends with a big fire, and points an appropriate moral. This is a form of fire prevention work which seems likely to be effective. The film is being shown extensively in the United States, and is recommended to the attention of fire preventive and other public organizations in Canada.

Insurance of Toronto's Soldiers.

City Treasurer Patterson, of Toronto, reported last month that approximately 19,462 citizens had enlisted for active service during the war, that 9,962 men were insured in the sum of \$1,000 each, as follows:—In Metropolitan Life, 8,600; in the Aetna Life, 1,100, and 262 in the State Life—a total of 9,962. The city was carrying the risk on 9,500, and this number was being increased daily. The significance of these figures lies in the great obligations the city has assumed in connection with the insurance proportion. In addition to the premiums which it has to pay to the insurance companies, the city is carrying a risk of \$9,500,000, which will be increased as more men enlist. The redeeming feature, however,

lies in the fact that results to date show that not more than 20 to 25 per cent. of the casualties terminate fatally.

Policy-holders Object to War Loan Investment.

Frank S. Monnett, formerly Attorney-General of Ohio, has begun suit in the Federal Court in Chicago against the Mutual Life of New York, J. P. Morgan & Co., the Anglo-French Commission and several individuals, for an injunction to prevent the Mutual Life from subscribing \$10,000,000 to the loan. The loan is held to be illegal and a violation of neutrality. Mrs. Olga S. H. Walsh is the complainant, having a \$2,000 policy. The petition alleges that twenty-two per cent. of the insurance company's policyholders are Germans of German descent, and that the participation in the loan would affect their loyalty to the company, and thereby would affect her interests. Lawyers hold that there is no ground for granting the injunction, as the directors of mutual companies are authorized to invest the funds of the companies in securities approved by law, and that it would be quite as proper for a policyholder to object to the loaning of money on a certain piece of property for any reasons he might allege.

Should Assured Bear Part of Loss?

It is unquestionable that the public interest would be served by the elimination of the possibility of securing any profit as a result of a fire. The principle of having the insured bear a part of his loss, has now received legislative recognition by the enactment in Wisconsin of the following statutes:

Section 1900f. (1) A policy of contract of insurance may, notwithstanding anything to the contrary in the statutes, contain in the policy or in a rider attached thereto:

(a) A provision that the insured shall bear the first part of any loss as provided therein to a specified percentage not exceeding 5 per centum of the amount of insurance.

(2) In any case of loss, the company or insurer shall pay the excess after deducting from the adjustment the part aforesaid. No such provision shall be valid unless there be stamped, written or printed upon the filing back of the policy, an endorsement hereby authorized, which shall read: "Rate reduced from \$. to \$. in consideration of the insured bearing the first part of any loss as herein provided." Both blanks must be filled.

As will be noted, this statute is merely permissive. The owner is informed as to the reduction in the rate by the use of such a clause, and is impressed with the importance of preventing the small losses.

It is held that such a clause could be used without special legislation even where standard policy laws are in force. The idea is so new, as regards fire insurance that some time will probably elapse before the insuring public recognize the benefit to be derived from the plan. It is not a new idea, however, in compensation or health and accident insurance, where often no compensation is payable for the first week of injury.

Fireproof Buildings and Sprinklers.

Many owners of so-called "fireproof" buildings are firmly of the opinion that the addition of automatic sprinklers to the equipment of such buildings would be merely an unnecessary and uncalled for expense. The fallacy of this theory was clearly shown by a fire which occurred in the Reid Building, Montreal, on the 5th of November last. The fire broke out on the 5th floor, in the sections occupied by the United Photographic Stores. The whole southerly section of this floor, together with contents, suffered very heavy damage, the salvage being comparatively small. Firemen were hindered in their efforts to control the fire on account of the height and lack of water pressure; street wire; combustibility of parti-

tions; and locked fire doors in the stair tower the latter being kept fastened to prevent access by the occupants of other floors. Practically all the combustible trim on this floor was destroyed, while the combustible partitions gave off such dense volumes of smoke that the employees were compelled to leave immediately and no attempt was made to use the fire pails. Had the building been equipped with automatic sprinklers, the release of one head would probably have extinguished the fire in its inception.

ELECTRIC SMELTING IN OPERATION.

The smelting of iron ores by an electrothermic process is discussed in a report which has just been issued by the Department of Mines, Ottawa. The report deals with the work which is being carried out in Sweden and Norway, and gives an illustrated account of the furnaces, with exact information about the different processes in operation.

The writer of the report, Mr. Alfred Stansfield, does not make unqualified deductions from the electric furnaces of other countries as bearing on the Canadian situation. He points out the essential parts played by the quality of the ore and the cheapness of electric power.

In Sweden there were in June last seven electric furnaces in actual operation and ten more in course of construction. These were, however, all of small capacity. The largest one produced only 30 tons of pig iron a day. The cost of making the iron, using the cheap Swedish water power, is somewhat less than in the charcoal blast furnace. The amount of iron that can be made with a definite quantity of charcoal is three times as much in the electric furnace as in the blast furnace. These considerations appear to represent the foundation of the present electric iron-smelting industry in Sweden. The writer states however that the electric furnaces cannot compete, commercially, with a modern coke blast-furnace of 400 or 500 tons daily output.

The technical description of the furnaces, with cuts and diagrams, will prove of the greatest interest to those who are engaged in the smelting of iron and steel. Already in this country original work has been done in the development of electric furnaces. That the electrothermic process can be generally used in Canada is confidently expected by many who have examined the iron deposits and the availability of water powers.

A copy of the report may be had on application to the Department of Mines, Ottawa.

COMBINING FORCES TO SEND EXPORT REPRESENTATIVE.

Furniture manufacturers of the United States are taking active steps to increase their sales in the Argentine. A number of them have combined to send a representative to Buenos Ayres, where he will open an office. From this centre, it is the intention of the representative to work out and introduce his lines throughout South America. Heretofore household furniture has for the most part been brought from Europe.

The project of the United States manufacturers is worthy of the attention of Canadian manufacturers, not only in furniture lines, but no less in the case of other products. Great advantages will manifestly come from the personal efforts of a salesman. Not only will he be in a favorable position to deal directly with the importing houses, but also he will be able to estimate the requirements of the people and advise his principals on questions of design, quality, shipping requisites, etc. It is to be hoped that Canadian manufacturers will share fully in the South American market.

ROLL OF HONOR—ADDITIONAL.

Capt. H. R. Cleveland, President J. L. Goodline & Co., Ltd., left Canada with the Fifth Canadian Mounted Rifles, but has since been transferred to the brigade staff under Brig.-Gen. C. A. Smart, Second Brigade, Canadian Mounted Rifles.

Capt. Grafton, of Grafton & Co., Ltd., Dundas, who was referred to in our last issue as G. F. Grafton, should have been Capt. J. S. Grafton.

Capt. J. M. McIntosh, Secretary, Toronto Branch Canadian Manufacturers Association, has left for Brandon, where he has been appointed Adjutant of the 79th Battalion.

AMALGAMATION OF MOTOR CAR COMPANIES.

A special meeting of the shareholders of the Russell Motor Car Company, Toronto, has been called for Dec. 6th, to sanction the amalgamation of that company with the Willys-Overland Co. The following official statement has been issued:

Of the \$6,000,000 capital of the new company, \$3,000,000 is preferred and \$3,000,000 common. The preferred will be divided into two classes: (1) Preference stock, \$1,000,000 cumulative 7 per cent. redeemable within five years at \$110 per share, and if not so redeemed the holders are to have the option of conversion into common stock at par at any time during the succeeding two years. (2) The balance, \$2,000,000, of preference stock is to be known as class B stock, with a cumulative 7 per cent. dividend, with the option to the holder of conversion into common stock at par value at any time within five years. Of the common stock only \$1,000,000 will be issued at present. The shareholders of the Russell Motor Car Company will acquire approximately one-third interest in the new Willys-Overland Company. For the assets which the Willys-Overland Company take over the shareholders of the Russell Motor Car Company will receive: (a) The whole of class A preference stock; (b) \$200,000 of the issue of one million of common stock to be redeemable at the option of

the Willys' interests at \$200 per share within five years; (c) \$100,000 in cash.

The Russell Motor Car Company retain all cash accounts and bills receivable. The Willys-Overland Company of Toledo have agreed to subscribe and pay for in cash \$1,800,000 of the class B preference stock of the new company.

Mr. T. A. Russell will be vice-president of the new company and Mr. Lloyd Harris will be a member of the board.

SPECIAL RATES FOR TRANSHIPMENT OF FREIGHT DURING REPAIRS TO PANAMA CANAL.

During the period that the Panama Canal is closed to commerce as a result of the recent slide at the Culebra Cut, cargoes will be handled by the trans-isthmian railway between steamers on the Atlantic and Pacific oceans on the following basis:

1. Steamers to pay the rates prescribed in the Panama Railroad Company's tariff for wharfage, use of cranes, and stevedoring of cargo in and out.

2. The following rates to apply for the transfer of cargoes on the railroad:

Classification in Local Tariff No. 4.	Charges per bill-of-lading ton.
No. 5	\$2 00
" 4	2 50
" 3	3 50
" 2	4 50
" 1	5 50
" 1½ x 1st class	10 00
D-1 (double 1st class)	10 00
" 2½ x 1st class "	15 00
" 3 x 1st class "	15 00
" 4 x 1st class "	15 00

Specie, gold, silver, precious stones, etc., one-fourth of one per cent., ad valorem.



Canadian Vessels are Moving the Biggest Crop of Wheat on Record. The Season of Navigation Will Close in a Few Days. C. P. R. Grain Elevator Loading Vessel at Head of Lakes.

TURNING TO THIS CONTINENT FOR SUPPLIES.

Newspapers in the United States are calling attention to the increase in volume and variety of that country's exports to Australia. That Australia is buying from the United States a great variety of merchandise formerly obtained from European markets is evidenced by the heavy cargo recently taken out of the port of New York by a steamer for Australia. This merchandise, according to the custom house statement, had a value of approximately three-quarters of a million dollars. The vessel carried twenty-three commercial and passenger automobiles, besides a liberal consignment of American toys for the Australian Christmas.

Some of the other items were bleached cloths, valued at \$39,898; cloths dyed in the piece, \$31,050; all other cloths, \$40,942; knit goods, \$17,974. In addition, there were large-sized exports of medicines, chinaware, extracts for tanning, wagons, athletic and sporting goods, dynamos, generators, dental goods, batteries, metal working machinery, wire fencing, other wire; men's, women's and children's shoes, organs, player pianos, table cutlery, hardware, phonographs, wearing apparel, and leaf, plug and smoking tobacco.

This steamer's cargo for New Zealand was similar to that carried to Australia. Although a British vessel, the *Clan Farquhar*'s manifest contained watches, perfumery and cosmetics for "German Oceania."

NEW ZEALAND TAX ON ENEMY'S GOODS.

The Revenue Bill recently introduced in the Parliament of New Zealand provides that the Governor may at any time, by Order in Council, gazetted, direct that on the importation into New Zealand of any goods specified in such order, being the produce or manufacture of any country now at war with His Majesty, there shall be imposed—in addition to any existing duty—an ad valorem duty by way of surtax of fifty per centum. This may be altered or revoked by subsequent Order in Council.

Primage Duty on Imports.

Sir Joseph Ward (Finance Minister) has introduced into the House as a substitution for a tax upon petrol, which was unpopular, a tax of one per cent. on all imports into New Zealand.

All Canadian imports after the passage of the Bill will therefore be chargeable with one per cent. primage import duty.

The following are exemptions from the primage duty:—

Ostrich feathers grown in New Zealand, when returned from abroad dressed or dyed, upon evidence being produced to the satisfaction of the collector of customs as to their previous exportation;

Exhibits for public display only in public museums, whether purchased under bond or directly imported by, or for presentation to such museums, on declaration that such goods will not be sold or otherwise disposed of in New Zealand without payment of any duty which may be payable;

Paintings, statuary and works of art, whether purchased under bond or directly imported by, or for presentation to, any public institution or art association registered as a body corporate, for display in the buildings of such institutions or associations, and not to be sold or otherwise disposed of;

Statuary, or works of art, whether purchased under bond or directly imported for display in any public park or place, on conditions prescribed by the minister;

Medals, including any old or second-hand war medals, humane societies' medals, and other similar medals, also old

coins, apparatus, appliances, articles and materials for educational purposes, as may be approved by the minister, and under conditions prescribed by him.

Official supplies for consular officers of countries where a similar exemption exists in favor of British consuls.

Passengers' baggage and effects, including only wearing apparel and other personal effects that have been worn or are in use by persons arriving in New Zealand; also implements, instruments, and tools of trade, occupation, or employment of such persons not exceeding £50 in value, and household or other effects not exceeding £100 in value which have been in use for twelve months prior to embarkation by the persons or families bringing them to New Zealand, and which are not intended for any other person or persons, or for sale; also cabin furnishings belonging to such persons not exceeding in value £10;

Returned empties, which are identified as such to the satisfaction of a collector of customs;

Specie, fish, ova, goods provided for by sections 139, 140, and 141 of Customs Act, 1913, produce of New Zealand re-imported and goods imported by the Governor of the State.

BIG SALES OF FARM IMPLEMENTS.

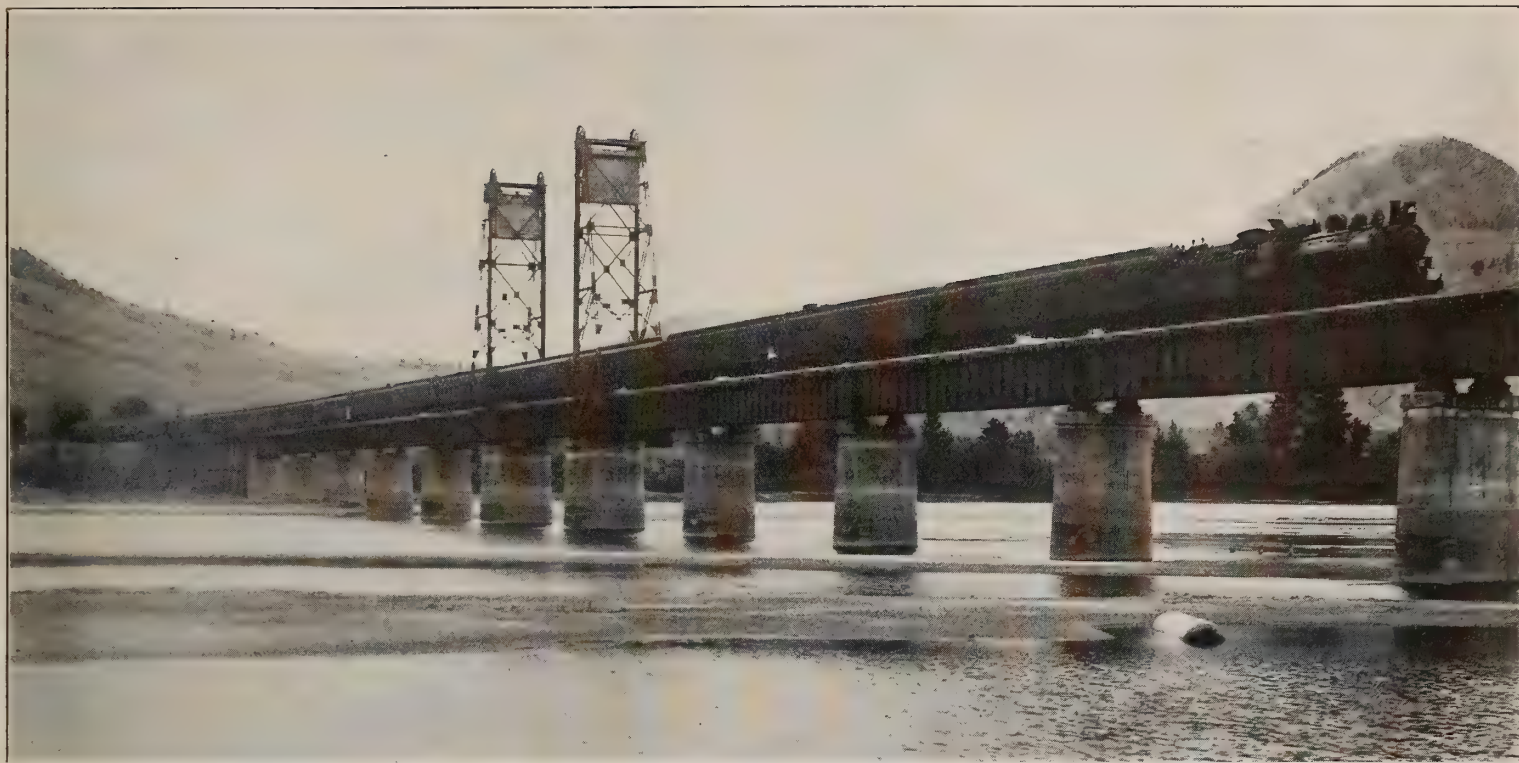
The following information will be of interest as showing the extent to which Russia purchases agricultural implements and machinery of all kinds from foreign countries. It is stated that 50% of the agricultural machinery employed in Russia is imported. For the last year for which statistics are available 40% of the imports came from Germany and Austria. It would appear that there is an excellent opportunity open to Canadian manufacturers for entering the Russian field at the present time.

The following table shows the values of the principal classes of agricultural machinery and implements imported into Russia during 1913:

	Total Imports. £
Agricultural machinery—	
Ploughs, steam and other, and harrows.....	607,000
Reaping machinery	1,168,000
Threshing machines	688,000
Sowing machines (drills etc.)	352,000
Locomotives for operating steam ploughs and threshers	767,000
Winnowing and sorting machinery	98,000
Cream separators and butter makers	120,000
Other agricultural machinery	1,055,000
Total, agricultural machinery	4,855,000
Agricultural implements and tools—	
Scythes, bills and sickles	154,000
Forks of all kinds	49,000
Straw cutters, spades, shovels, rakes, hoes, etc..	61,000
Total, agricultural machinery and implements	£5,119,000

A BOOK OF USEFUL INFORMATION.

No question of industrial or commercial life seems to have been overlooked in *Rose's Handbook of Useful Information*. With it one can compute interest, deal in foreign coinage and measures, figure on horse-power, and rectify most of the troubles that arise in the day's work. The scope of the book is too broad for us to attempt to summarize its contents. It should, however, prove a valuable handbook for ready reference. Published by the Hunter-Rose Company, Ltd., Toronto.



A demonstration of an easy grade line. 16-car passenger train of the Canadian Northern on the bridge crossing the North Thompson River at Kamloops, B.C.

OPENING NEW TRANSCONTINENTAL RAILWAY

THE opening of the transcontinental line of the Canadian Northern Railway System, which was practically effected by the running of the Parliamentary Special from Quebec, Montreal and Toronto to the Pacific coast and return during October, is of more than passing interest to manufacturers in Canada. The system, which the completion of the lines between Sudbury and Port Arthur and between Edmonton and Vancouver elevates to transcontinental importance, is a modern production. The first mile of line was laid in Central Manitoba; the last spike on the Pacific division was driven at Basque, 182 miles east of Port Mann, on January 23rd of this year.

On the ten thousand miles of line, rolling stock, terminals, hotels, steamships and elevators, comprising the system, there has been expended approximately four hundred millions of dollars, chiefly in Canada. The management claim that there has been constructed in the Canadian Northern Railway System a network of lines serving the productive areas of Canada, and a main line crossing the continent with the easiest grade of any road of similar national importance on the continent of North America. The published expressions of opinion of the newspaper writers and the parliamentarians who were on the special train appear to confirm their contentions.

The average shipping distance of the Canadian manufacturer who covers completely the domestic market is as great as the average shipping distance of the German manufacturer in reaching his export trade. With England, Belgium, Holland, France, Austria and Russia at his door, the German manufacturer has had a tremendous advantage in the development of trade. Canada is a country of rich and varied resources—and great distances. To assemble the raw materials of the Canadian manufacturer, and to distribute his manufactured products, involves the extensive use of overland transportation facilities. It is the function of transportation companies to transport people and goods from point to point efficiently and economically. The railway that is in a position to do this has obviated in advance much of the worry arising from

strenuous competition, and may be of greatest service to the shippers of the country.

Easy Ruling Grades.

Because of the intimate relationship existing between facilities for transport and the success or failure of manufacturing enterprise, the handling of a heavy sixteen-coach passenger train from Atlantic tidewater to Pacific at Vancouver by one locomotive appears to be an achievement which may not be dismissed with merely cursory attention by the manufacturer. The advantages of an easy ruling grade on long stretches of track in Canada are almost as important to the manufacturer as to the railway company operating the line. Transportation engineers seem to have very good reasons for the premise that goods handled over a road whose dominating characteristics are absence of sharp curvature and abrupt



Through Yellowhead Pass. The new Canadian Northern line on the upper level. Below is seen the track of the Grand Trunk Pacific

ascent or descent, run scarcely any risk of damage or breakage en route. A loaded car rolls as easily over long stretches of straight track as a loaded moving van rolls over level, straight-away pavement. The inference is obvious.

Completing the Line.

The advent of the Canadian Northern as a factor in transportation in Canada has come in the nature of a surprise to the people of the Eastern provinces. It was, of course, generally known that the company was operating some five or six thousand miles of line between Lake Superior and the Rocky Mountains; but in the East, because of the former lack of vital connecting lines the company was unable to impress itself as a system of national importance upon the attentions of the people east of the Great Lakes. The manufacturer may be excused because of the fact that until the present month the Canadian Northern did not have a through line between the Eastern industrial centres and the points on its lines in the Prairie Provinces.

Yet so important is the system that with the construction of an additional forty miles it will be serving the cities and towns containing sixty per cent. of the urban population, and producing seventy per cent. of the total manufactured products of Ontario and Quebec. Its main lines from east to west serve Quebec, Montreal, Ottawa, Smith's Falls, Brockville, Kingston, Belleville, Port Hope, Cobourg, Oshawa, Toronto, Pembroke, North Bay, Sudbury, Port Arthur, Fort William, Winnipeg, Portage la Prairie, Brandon, Regina, Saskatoon, Calgary, Prince Albert, North Battleford, Edmonton, Kamloops, New Westminster, and Vancouver, besides a host of intermediate points. The system has arrived, after eighteen years of unremitting effort, at a point where it commands widespread attention, and its directors believe that the Canadian Northern will prove itself to be of inestimable benefit to the manufacturers in Canada.

MUST GET LICENSE TO CARRY NEUTRAL CARGOES.

British ships cannot carry cargoes from a port in a neutral country to a port in another neutral country except under special license from the British Government, according to an Order-in-Council announced under date of November 30th. Thus, a British ship could not carry goods from Sweden to Portugal or from the United States to Norway, unless it had a license for that particular shipment from the British Government.

The following memorandum covers the order:

Whereas a state of war exists between His Majesty and the German Emperor, the Emperor of Austria, King of Hungary, the Sultan of Turkey and the King of the Bulgarians;

And whereas His Majesty holds it to be his prerogative duty as well as his prerogative right to take all steps necessary for the defence and protection of the realm;

And whereas it has been made to appear to His Majesty that it is essential to the defence and protection of the realm that in the exercise of his prerogatives as aforesaid he should prohibit as from and after the first day of December, 1915, the carrying of cargo from any foreign port to any other foreign port by any British steamship registered in the United Kingdom exceeding 500 tons gross tonnage and whether or not such ship while carrying such cargo calls at any intermediate port within His Majesty's Dominions unless the owner or charterer of such steamship has been granted exemption by license as hereinafter provided, —

Now therefore His Majesty is pleased, by and with the advice of his Privy Council, and in exercise of his preroga-

tives as aforesaid and of all other powers (given?) him thereunto enabling (him?) to order and it is hereby ordered that from and after the first day of December, 1915, no British steamship registered in the United Kingdom exceeding 500 tons gross tonnage shall carry any cargo from any foreign port to any other foreign port and whether or not such ship while carrying such cargo calls at any intermediate port within His Majesty's Dominions unless the owner or charterer of such steamship has been granted exemption by license as hereinafter provided, and His Majesty doth hereby declare that the expression "foreign port" herein used shall mean and include any port outside His Majesty's Dominions, and His Majesty by and with the advice aforesaid and in exercise of his prerogatives and powers as aforesaid is further pleased to authorize and direct the President of the Board of Trade to appoint a committee of persons to carry out and give effect to the provisions hereof, and that the said committee shall have power to grant licenses of exemption therefrom to or in favor of owners and charterers of such steamships as aforesaid which licenses may be general in reference to classes of ships or their voyages or special, and His Majesty is further pleased to authorize the President of the Board of Trade from time to time to add other persons as members of such committee and to substitute as members thereof other persons for such members as may from time to time die, resign or be, or become incapable of acting thereon, and the President of the Board of Trade is to act and to give instructions and directions accordingly.

ALMERIC FITZROY.

CHEVROLET CARS WILL BE MANUFACTURED BY McLAUGHLIN CO.

When asked about the widespread comment and rumors regarding the McLaughlin Carriage Co. and the Chevrolet cars, an official of the McLaughlin Carriage Co. made the following statement:

For over half a century our Company has been making carriages in Canada, and for over eight years manufacturing automobiles. But the development of the motor car business has marked a new epoch in the vehicle-making industry.

A short time ago the Chevrolet Motor Company, a \$20,000,000 corporation of the United States, approached us with a view of interesting us in the manufacturing of the Chevrolet Model "490" in Canada. A low-priced car with electric starter and full equipment, selling at \$675. A production would be required for the first year of between six and eight thousand cars.

In order to manufacture this quantity of motor cars we found it would be necessary to dispose entirely of our carriage industry, and convert that portion of our factory solely to the manufacture of Chevrolets.

We decided that the great future of our plant lay in the manufacturing of motor propelled vehicles, therefore sold our buggy business to the Canada Carriage Co., of Brockville, who will take care of all our unfinished contracts.

The Chevrolet Motor Co. of Canada, Limited, was recently incorporated and capitalized at \$500,000. We have decided to increase this capital to \$1,000,000. Every dollar capital will be purely Canadian money with the exception of single shares to qualify men interested in the United States Chevrolet Co. to be on the Board of Directors.

This deal will in no way interfere with the manufacturing of the popular McLaughlin automobiles for which we have made provision to produce more than double this year's output for 1916.



TRANSPORTATION



PACIFIC COAST TRADE.

A well attended meeting was held in the Association offices on November 11th last for the purpose of hearing the report of Mr. S. R. Parsons, Vice-President, and Mr. J. E. Walsh, Manager of the Transportation Department, who recently visited the Pacific Coast by direction of the Executive Council for the purpose of ascertaining as far as possible what was necessary to retain this Pacific Coast trade in Canadian channels.

The representatives of the Association were met on the Coast by Mr. W. B. Lanigan, Assistant Freight Traffic Manager of the Canadian Pacific Railway, and Mr. A. E. Rosevear, General Freight Agent of the Grand Trunk Pacific, and they held conferences with representatives of the Vancouver, Victoria and New Westminster Boards of Trade. These representatives were united in the view that the solution of the question was the appointment of a customs' officer at the port of New York, so that Canadian goods might be shipped through that port and the Panama Canal.

It was apparent that these Boards of Trade had received the impression that the attitude of the Canadian Manufacturers Association had changed in regard to the appointment of an officer at New York. This was due to a telegram from the secretary of the Vancouver Board of Trade, who was at that time in the East. It transpired later on that the telegram was not intended for publication, and furthermore that a mistake had been made in its transmission, a public statement to that effect being made at a subsequent meeting with the representatives of these Boards. The sender of the telegram further stated at that meeting that the Association was to be complimented on the assistance it had rendered in regard to the appointment of a customs officer at New York.

Separate meetings were held with the representatives of the hardware, grocery and other wholesale interests, and a large amount of valuable information secured. Some of this has already been placed before interested manufacturers, and has proved of considerable value in the adjustment of rates which the railways now have on foot. Other manufacturers are being consulted.

One of the representatives of the railways who visited the Coast has already spent some time in consultation with the manufacturers, as a result of which certain commodity rates were recommended. These have been adopted by the Executive of the Canadian Transcontinental lines. A special committee has also been appointed by the railways to take up at once with the Association other rate adjustments outstanding. As the Canadian Transcontinental lines have, in so far as purely Canadian traffic is concerned, severed their connection with the Transcontinental Freight Bureau at Chicago, it is the intention of this committee to build up a Canadian Transcontinental Tariff that will suit Canadian conditions. It is the general opinion that the departure is a decided improvement, and that prompt action may be expected in dealing with transcontinental rates, which, generally speaking, heretofore has not been the case.

The interests on the Pacific Coast made it clear that whilst they are willing and anxious that Canadian lines should get all the traffic they can, the agitation for a customs officer at the port of New York will not be dropped. It is the expressed belief that their future depends, to a very considerable extent, on the establishment of such a service. Some of the repre-

sentatives of the steamship lines are very active in urging the service; in fact, a representative of a British line which has been operating between British ports and Canadian Pacific Coast ports for some years, announced that in the event of an officer being placed at New York, his line would arrange to call at that port. Undoubtedly a service of this kind will depend entirely upon the tonnage offering.

Generally speaking there is no desire on the part of the Canadian manufacturers to ship goods other than by Canadian lines. This fact has been demonstrated in the adjustment of rates already agreed upon. If the carriers, on the other hand, want this traffic, they must consider the rates obtainable by other routes, and which have been established for the purpose of securing the traffic.

SOME ASPECTS OF STATE OWNERSHIP OF RAILWAYS.

There has been more or less talk in the press recently in respect to "Government Ownership" of our railway system. In fact since the Government decided to operate the National Transcontinental Railway there have been rumors that there was a possibility of the Grand Trunk Pacific being placed under Government management. Whether or not this is possible at the present time depends upon the terms of the contract between the Government and the Company.

The taking over of the Grand Trunk Pacific by the Government, it is prophesied, would lead to the adoption of Government ownership of our entire system, including the Canadian Pacific Railway. The question is serious, and one in which the general public is interested. Public opinion will have to determine whether private or public ownership is preferable.

Mr. L. E. Johnson, President of the Norfolk & Western, in an address before the Western Society of Engineers in Chicago, dealt with the question in this way:—

"I believe a majority of the people think at present that the adoption of Government ownership would not promote the public welfare, but would have the opposite result. There are a very few countries, Prussia affording the best example, where state railways have been managed with a considerable degree of success, but in most countries both the economic and political results of government management have been bad. Forty years ago an Italian Commission which had thoroughly studied the subject expressed the opinion that under government ownership politics would corrupt the railroads and the railroads would corrupt politics. This view has been supported by the experience of Italy itself and by that of France, of Australia, of Canada, and of every other country where the conditions have been such as to make it possible for politics to affect government management. Nowhere else, perhaps, has the deplorable influence which politics is almost certain in a democratic country to exert on government railway management been more strikingly illustrated than in our next-door neighbor, Canada.

"Since 1867 the Dominion has owned and operated the Intercolonial Railway, and since 1873 the Prince Edward Island Railway. These lines now have a mileage of 1,734 miles. Never in a single year since the Government acquired it has the Prince Edward Island earned even its operating expenses, to say nothing of interest on the investment in it. The Intercolonial in the 47 years it has been under Govern-

ment management has failed by \$8,500,000 to earn its operating expenses, to say nothing of interest on the large investment which the people of Canada have made in it. Other railways in Eastern Canada owned by private companies have charged practically the same rates as these Government railways and have been operated at a profit.

"In 1904 the Government began the construction of the National Transcontinental Railway from Moncton to Winnipeg. The official estimate of its cost was \$61,415,000, or \$34,083 a mile. At the end of 1914 the line had not been provided with equipment or adequate terminals, and yet up to that time there had been spent on it \$173,000,000, or about \$99,000 per mile. A Government Commission appointed to investigate its construction denounced it as enormously wasteful, and the Grand Trunk Pacific, to which it had been intended to lease the line for operation, refused to take it over because it could not afford to pay three per cent. interest on the excessive expenditure which had been made.

"The explanation of the wasteful construction of the National Transcontinental is the same as the explanation of the wasteful operation of the Intercolonial. The work was done on political rather than business lines. The principle of the 'pork barrel' had dominated the management and construction of Government railways in Canada as it has the development of waterways, the erection of public buildings and a good many other matters in this country.

"The experience of other countries and the conditions in our own warn us that we cannot afford to try the experiment of Government ownership of railways here; at least not until our Government management would not be rendered impossible by politics of the 'pork barrel' variety."

Whilst the statements of Mr. Johnson with regard to the experience of the operation of the Canadian Government System may be true, and no doubt the statistics have been furnished from a reliable source, he has overlooked the fact that the construction of the Intercolonial and Prince Edward Island Railways were the price of Confederation. It is, therefore, questionable whether they would have been built at all by private companies, or at least under the conditions under which they were constructed.

The situation in Canada is different probably from any other country in the world, in that the different Governments are bound up in various ways with our system of railways. As an illustration: They have authorized bonds to the extent of \$406,259,165. Of this amount, \$268,710,264 has been executed, and \$235,473,394 earned. There are also, of course, the cash and land subsidies to be added to this, as well as the cost of construction of the National Transcontinental Railway.

The Alternative.

There is only one alternative to Government ownership. This is a system of wise and fair regulation. The three purposes of Government regulation should be to further the economy, efficiency and safety of railway operation; to cause rates to be reasonable and indiscriminatory, and to make investment in railway securities safe and attractive.

COLLECTION OF CARTAGE TOLLS FROM CONSIGNEES.

The Retail Merchants' Association of Fort William issued a notice a short time ago that from November 1st, 1915, they would decline to pay "consignors' cartage charges from their (your) warehouses to point of shipment (dock or station)."

The circular stated that at a recent sitting of the Board of Railway Commissioners at Fort William, it was established that the consignor had no right to bill cartage charges forward and have them collected from the consignee. The Commission has just disposed of the question as a result of several complaints.

Briefly, the Board says: Cartage is not covered in the maximum toll which railways may collect for the service of transportation as contemplated by the Act. It is entirely a separate and distinct matter. The Railway Act contemplates charges for cartage. The practice which has been followed for years was in effect that the railway companies have advanced cartage charges on outward shipments to the cartage companies, and have included in their freight bills under the caption of "Cartage Charges" the amount advanced.

In August of 1913 the railway companies proposed to cancel all cartage charges. A strong protest was made against the proposal. It was reconsidered by the railways, and at the request of the shippers the practice was continued under a somewhat higher tariff. At that time, as now, the consignees objected to being charged the cartage rate. The position taken by the Board at that time was that the Board had not the power, and should not attempt to change or direct in any way the rights and obligations of the contracting parties; that the question as to whether the consignees should or should not pay cartage was a matter entirely of contract between the consignors and the consignees; that the Board had nothing to do with the question, and that the work of cartage was not a railway service or facility within the meaning of the Act, although covered by the definition of "toll."

In cases where the purchase is f.o.b. cars at shipping point instead of at the warehouse, there is no doubt that the consignees should not have to pay the cost, which should be borne by the consignor, but this question is not, however, in any sense a question for the Board. Generally speaking, the railway company is bound by the instructions of the consignor. If *these instructions* include collection of the cartage charges in addition to the collection of the freight charges there is no reason why the railway company, under the Act, cannot hold delivery of freight until payment is made. The consignee's remedy is simple, as he has but to deduct the sum collected, if properly collected, from him for cartage from his invoice.

The case is much the same as if the consignor, in a case where the contract called for free delivery at destination, had forwarded the shipment with freight charges collect. In each instance the question as to whether the freight charges or cartage charges should be paid by the consignor or the consignee depends upon the terms of the contract to which the railway company is not a party, and has no means of ascertaining the fact.

The judgment makes it clear that the Board has not undertaken to interfere in any way between the contracting parties. At the same time it establishes the fact that if the consignor instructs the railway company to collect cartage charges in addition to freight charges, delivery can be withheld until payment is made.

As the circular letter of the Retail Merchants' Association of Fort William has been addressed to manufacturers generally, they will no doubt be interested in the above ruling.

MARK FREIGHT PACKAGES DISTINCTLY.

Recently the Chairman of the Committee on Marking and Packing of the Agent's Association of Chicago advised all freight agents under personal cover that the committee would in the near future meet with the Railway and Steamboat Warehouse Committee for the purpose of resuming the fall and winter campaign on illegible shipping tickets, etc., and asked that they forward documents covering the following:—

1. Illegible shipping tickets.
2. Second hand boxes, "old marks not removed."
3. Initials instead of full name of consignee.
4. Order and notify shipments improperly marked.

5. Shipping tickets not properly signed.
6. Trade name of firm shown, but does not show the prefix "from."

The object of the committee was to get the names of firms which were sending out imperfectly marked packages and to show them wherein they were offending. An imperfectly marked package (1) Is delayed in reaching its destination; (2) Is not infrequently sent to the wrong address; (3) Has not sufficient directions on it for finding and notifying the consignor; (4) Is the source of great inconvenience, delay and profanity among the freight office officials.

As a result of the first effort firms were written to and advised as follows:—

1. Illegible shipping tickets	44	firms
2. Second hand boxes, "old marks not removed" ..	37	"
3. Initials instead of full name of consignee	0	"
4. Order and notify shipments improperly marked ..	3	"
5. Shipping tickets not properly signed	114	"
6. Firms omitting the prefix "from"	25	"
Total	223	"

Persistent education alone will better this condition, which exists no less in Canada.

NEW KNITTING MILL.

The Circle-Bar Knitting Co., Ltd., are equipping a mill in Kincardine, Ont., and expect to be in operation by December 1st. They will manufacture cashmere, cotton and silk hosiery for men, women and children.

NEW SCIENTIFIC METHOD OF CONVEYING.

The problem of moving shell forgings, steel billets and shells in process of manufacture has been solved by a Well-land manufacturer, and other manufacturers, by adapting Gravity Carriers in performing this operation.

The volume of these products which are being produced by the leading manufacturers of Canada, created a demand for some simple conveyance of moving them from place to place and for a time baffled the inventive genius of local engineers.

The means of handling by labor proved slow and expensive, aside from the confusion of having large numbers of men and trucks to move the products. The Canadian Mathews Gravity Carrier Co., Ltd., Toronto, mastered the problem at once by means of Steel Ball Bearing Gravity Carriers and Elevators, Patented.

These efficiently perform the operation, are a permanent and lasting benefit to the manufacturer and insures the prompt movement at times when a congestion at any one point would delay the speed at which they might be produced, time being the important factor while our men in the trenches are "marking time" and waiting for shells with which to maintain their position or gain a few feet of the invaders' trenches.

The view herewith shown marks an enclosed Gravity Carrier, by means of which a constant flow of shell forgings is loaded into cars, many of which are shipped to the sea-board and across the ocean to the machine shops of Great Britain, where the machining process completes the shrapnel 4.5, 6 inch and other sizes of projectiles.



Scientific Carrier System Installed in Canadian Factory

T A R I F F

By J. R. K. BRISTOL

CUSTOMS RULINGS.

The following Customs rulings of interest to manufacturers have been given out since the publication of our November number:—

Manifesting of Bonded Goods for Mimico, Ont.—Bonded goods consigned to Mimico and transported as *freight* by Canadian Pacific Railway or Grand Trunk Railway may be manifested on the port of Toronto—Mimico Station.

When the manifests are so marked the bonded goods may be delivered at Mimico, subject to entry at Toronto Custom House.

Boilers declared not to be "machinery" when imported without the engine.

Feed Molasses testing over 35 degrees by the polariscope when imported direct from the place of production, declared to be dutiable at 3c. per gal., under Item 136.

Hosiery Dryer per illustration and description, for drying socks and stockings after same come from the dyeing machine, declared to be dutiable under Item 468, being of a class or kind not made in Canada. Under Item 468 duty is 10% ad valorem, plus the war tax.

Diamond hand tool as illustrated and described, used for dressing abrasive grinding wheels declared to be dutiable under Item 711. By the provisions of Item 711 the duty payable under the British Preferential Tariff is 15%, and under the General Tariff 17½%, plus the war tax.

Cylinder Rasps for the repair of cylinders of threshing machine separators, declared to be dutiable under Item 447. By the provisions of Item 447 the duty payable under the British Preferential Tariff is 15% and under the General Tariff 20%, subject, of course, to the additional duties payable under the war tariff.

Opalite and Vitrolite Tiling in large dimensions, not ground on edges, declared to be dutiable under Tariff Item 326 (a). By the provisions of this item the duty payable under the General Tariff is 22½%, ad valorem, plus the war tax.

Cyanide of Sodium for reducing metals in plating operations, free under Item 208, except for the war tax.

Ruling of the Treasury Department at Washington that *fibreboard*, per sample, is dutiable at 25% under Item 355 of the United States Tariff.

Ruling of the United States Treasury Department prescribing regulations under which *diamonds* may be sent to the United States for repair without payment of duty under the United States Tariff.

Ruling of the Treasury Department that *creosoted wood paving blocks* may enter the United States at the duty of 15% under Item 176 of the United States Tariff.

Proclamations of the Governor-General in Council:—

1. "His Royal Highness the Governor-General in Council, under and in virtue of the provisions of sections 242 and 291 of The Customs Act, is pleased to order as follows:—

"The exportation of the following goods is hereby prohibited to all foreign countries in Europe, and on Mediterranean and Black Sea, other than France, Russia (except through Baltic ports), Italy, Spain and Portugal, viz.:—

"Fish of all kinds, whether cured, salted, or fresh.

2. "His Royal Highness the Governor-General in Council, under and in virtue of the provisions of sections 242 and 291

of the Customs Act, is pleased to order and it is hereby ordered, that the exportation of the following goods be prohibited from Canada to foreign destinations in Europe other than France, Russia (except through Baltic ports), Italy, Spain, and Portugal, viz.:—

"All manufactures and products of cotton except cotton waste, which remains prohibited to all foreign destinations, and cotton lace;

"Furs, dressed or undressed, and manufactures thereof."

COMMERCE REPORTS.

American Condensed Milk Showing Rapid Gains in Exports.

American condensed milk is being exported in record-breaking amounts, with sales aggregating 37,235,627 pounds in the fiscal year 1915, against less than one-third that amount in 1911. Public inquiries for up-to-date information on the subject have been so numerous that the Bureau has prepared an advance statement showing the distribution of condensed milk from the United States to the different countries.

Cuba leads the world among the foreign markets for this American product, her annual purchases almost equalling the combined sales to all Europe. Very large amounts are sold also in the Orient, chiefly Japan, China, and the Philippine Islands.

The following table shows the leading markets in the fiscal year 1915, with a summarization for several prior years:—

Exports of American Condensed Milk, 1915, in Order of Magnitude.

Countries.	Lbs.	Value.
Cuba	8,391,400	\$765,400
England	4,015,100	243,300
Belgium	3,332,900	281,800
Japan	2,738,200	318,700
Netherlands	2,565,300	186,600
Philippine Islands	2,531,800	192,300
China	2,496,500	210,600
British South Africa	1,867,300	129,100
Asiatic Russia	1,830,400	115,300
Panama	1,389,400	103,900
Hong Kong	873,800	74,600
Mexico	767,100	62,300
Peru	637,400	47,000
Brazil	600,900	56,700
Jamaica	552,700	44,900
Chosen (Korea)	426,600	48,200
British Honduras	274,500	24,200
Chile	259,000	21,000
Honduras, Central America	241,500	20,700
Other countries	1,443,800	120,000

Totals, 1915	37,235,600	\$3,066,600
1914	16,209,100	1,341,100
1913	16,525,900	1,432,800
1912	20,642,700	1,651,900
1911	12,180,400	936,100

The first three months of the fiscal year 1916 were characterized by a further expansion of exports in condensed milk.

For July the total was 5,172,300 pounds; for August, 7,043,600 pounds; and for September, 9,786,200 pounds, making the sales in three months 22,002,100 pounds, or more than those for the year 1912.

Imports of fresh and condensed milk in 1915 aggregated \$2,556,800, and are now averaging about \$225,000 per month.

Canadian condensed milk also shows rapid gains in exports. The exports during the year ended March 31, 1915, follow:—

	Lbs.	Value.
United Kingdom	208,073	\$12,075
Bermuda	4,170	336
British South Africa	4,600	225
British Guiana	480	40
British West Indies	143,594	12,384
British Straits Settlements	12,250	510
Hong Kong	123,100	8,792
Newfoundland	183,760	16,171
Alaska	520	60
Belgium	52,880	4,488
China	398,065	31,212
Holland	2,250	100
Japan	1,746,800	148,784
Miquelon and St. Pierre	1,663	188
Philippines	18,430	746
United States	15,455,340	945,189
	18,355,975	1,181,300
1914.....	9,379,382	671,042
1913.....	344,081	25,982

COLOMBIA.

It appears that it has been the practice in Colombia, at least in certain custom houses, to admit free of duty goods imported as substitutes for those previously imported and returned to the country of origin after clearance through the customs and payment of duties. An order of the Minister of Finance of August 5th, 1915, prohibits such exemptions and provides that articles re-imported into Colombia, as well as those intended to replace re-exported articles, shall in the future be subject to the usual import duties.

ICELAND.

A law authorized by the King of Denmark under date of September 16th, 1915, provides for an export tax on shipments from Iceland of fish, fish oils, butter, wool, salt meats, sheepskins, sealskins, horses and sheep.

An interesting feature of the law is the provision that duty is to be levied on the difference between the price of the products prevailing before the war and the present price, the amount of duty being fixed at 3 per cent. of such excess value.

JAPAN.

Owing to the effect of the war on the foreign trade of Japan, the Japanese Finance Department has been engaged for nearly a year in conducting investigations, with a view to the revision of the customs tariff and the extension of the system of drawback and of the customs warehouse system. The new drawback regulations are to be put into effect in the near future by imperial ordinance, while the tariff revision measure, which is to include the changes in the customs warehouse regulations, is to be taken up at the coming session of the Japanese Diet.

It is stated that the general tendency of the revision, which is to affect a large number of articles, will be the reduction or abolition of the duties on certain raw materials used in

domestic manufactures, the importation of which has recently been much restricted, and increased duties on articles such as drugs and medicines, the domestic production of which has been stimulated because of the war. The tariff revision is expected to result in some decrease in the customs receipts.

SALVADOR.

A presidential decree of October 2nd, 1915, in effect October 4th, reduces the duty on cotton bags not exceeding 108 centimeters in length and 70 centimeters in width, from 0.75 to 0.20 peso per dilo (from \$29.58 to \$9.88 per 100 pounds, inclusive of surtaxes). The duty on such cotton bags under the new customs tariff of Salvador, which is to go into effect January 1st, 1916, is reduced from \$0.50 to \$0.18 per kilo (from \$22.22 to \$8.18 per 100 pounds). (Meter (100 centimeters), 39.37 inches.)

UNITED KINGDOM.

Since the introduction of the budget law in Parliament, providing for the levying of customs duties on certain additional articles imported into the United Kingdom, there has developed a strong sentiment in Nottingham in favor of a tariff on cotton and silk laces and embroideries. The Chamber of Commerce has taken the matter in hand, and, through its chairman, has made strong representations to the Chancellor of the Exchequer.

The two main arguments relied upon by the advocates of a tariff are: (1) That laces and embroideries are luxuries and therefore should be heavily taxed, especially at this time, in the interest of economy and to discourage as far as possible the importation of foreign goods; (2) That the lace industry of Nottingham has been seriously affected by the war, and foreign laces should therefore be taxed in order to protect home industries.

URUGUAY.

By a decree of August 7th, 1915, the sale in Uruguay of all substances for the destruction of cattle vermin is prohibited unless the preparations have been approved by the executive on the recommendation of the officials of the animal sanitation service, to whom samples must be submitted. Application for authorization of sale must state the qualitative and quantitative composition of the product and the general conditions of its use, specifying the minimum time required to effect a cure, etc., and must be accompanied by a deposit of 250 peso (peso, \$1.034) as a security for the expenses of testing. Containers of approved preparations must bear a yellow label on which is printed in black the full text of the certificate authorizing their sale.

SYDNEY (N.S.W.) MUNICIPAL CONTRACTS.

Preference to British Manufacturers During the War.

With reference to the notice on p. 536 of the *Board of Trade Journal* of 20th May last relative to preference being granted to British manufactures by the Sydney (N.S.W.) Municipal Council, H. M. Trade Commissioner for Australia (Mr. G. T. Milne), reports that at a meeting of the Council on 24th July last, a resolution, confirming the previous decision, was passed as follows:—

“(a) That during the present war a 10 per cent. preference be given to goods manufactured by British companies on the price ex works, and a 5 per cent. preference be given to goods manufactured by Allied Countries.”

“(b) That British companies shall be taken to mean com-

panies where a majority of the shares are held by natural born subjects of the British Empire. That information on this point shall be supplied by statutory declaration by the firm tendering."

BRAZIL.

The Board of Trade are in receipt through the Foreign Office of telegraphic information from H. M. Minister at Rio de Janeiro to the effect that the Brazilian Chamber of Deputies has agreed to a proposal that a Commission (to consist of five members of the Chamber of Deputies and four members of the Senate), should be appointed to study the question of the revision of the existing Brazilian Customs Tariff.

The result of the Commission's labors is to be embodied in a Bill which (Mr. Peel reports) will probably be laid before the Brazilian Legislature for discussion at the next session.

FRANCE.

Exportation of Heavy Hides and Tanning Extracts to the United Kingdom.—With reference to the notices in the *Board of Trade Journal* for the 1st July. (pages 24 and 54), respecting the exportation of heavy hides and tanning extracts from France to the United Kingdom, the Board of Trade are in receipt, through the Foreign Office, of information to the effect that, whilst the agreement with the French Government with regard to the exportation of heavy hides has terminated, arrangements have been made with the Government as to the future export of heavy hides to the United Kingdom. All enquiries on this subject should be addressed to the Commission Internationale de Ravitaillement, India House, Kingsway, London, W.C.

As regards tanning extract the Board are informed that the French Government are not at present allowing the ex-

port of this article to the United Kingdom, pending enquiries which they are making as to the possibility of there being any extract available for export after the requirements of the French tanneries are satisfied. It is understood that, as soon as there should appear to be a surplus, the French Government will be prepared to allow export to the United Kingdom. Enquiries in this connection should simply be addressed to the Commission Internationale.

HOW GERMANY WILL LOSE A MONOPOLY.

The day of Germany's monopoly of the dye industry is past. The organization of factories in other countries, under Government support and with Government protection, insures a varied supply for the future. Japan has now entered the field.

The Japanese Government has voted a subsidy to all corporations and firms engaged in the manufacture of dyes, provided more than half of the capital is subscribed by the subjects of Japan. The artistic value of Japanese industries depends much upon dyes, and the supply heretofore has come mainly from Germany.

The amount of the subsidy will enable the companies to pay a dividend of 8 per cent. on the paid up capital, and the subsidies will be for ten years. The manufacture of material for gunpowder will be regarded as manufacture of dyes and chemicals.

NEW HAT FACTORY.

Mayhew Hats, Ltd., have acquired the hat manufacturing plant in Niagara Falls, Ont., formerly operated by the E. J. Von Gal Co., Ltd. The company manufacture felt hats. Mr. W. E. Mayhew is president of the company.

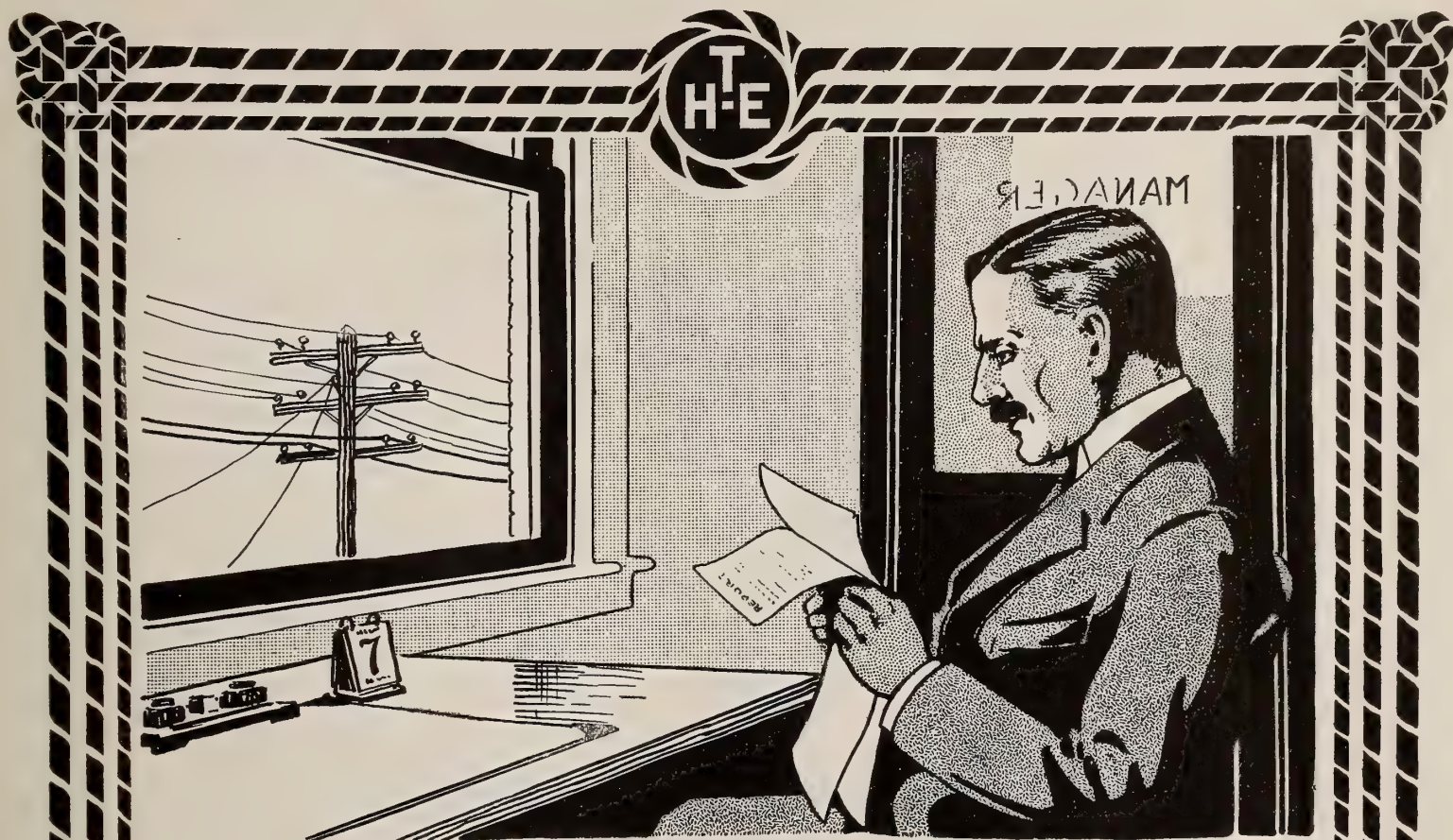


"Ventura" Disc Ventilating Fans for handling large volumes of air at low power costs.

"Sirocco"
TRADE MARK

Is the trade mark of the Canadian Sirocco Company, Limited. It is significant of the highest quality—highest efficiency and general mechanical superiority.

Sirocco Multi-Blade Fans occupy less space, and require considerably less expenditure of power for a given duty than any other type of fan.



Don't worry, put it up to Hydro

In these days of specialists, a man does his business an injustice if he ignores an offer of skilled, outside advice about any department in which he spends money without getting a visible, checkable return for it.

You are paying for Power, of course. If you use Hydro, you know exactly how much per h.p. you are paying, and you know you are getting exactly what you pay for—the meter tells you.

Of course, you MAY be on the right side as you stand, but, do you KNOW? Here is where the offer of skilled, free advice comes in. Hydro engineers are waiting to make a report on your power plant—to advise you exactly how much it is costing for what you get, and how to lower the cost, if that is possible. Ready to-day.

We are at the other end of your telephone wire.

The Toronto Hydro-Electric System

226 Yonge Street

Phone Adel. 2120

CANADA'S FOREIGN TRADE.

The total Canadian foreign trade for the month of October, 1915, exclusive of coin and bullion, amounted in value to \$123,617,209, compared with \$86,649,961 for the same month a year ago. Over thirty millions of the increase is accounted for by an increase in exports of domestic products. The details of Canada's foreign trade for the months of October, 1915 and 1914, respectively, and also for the seven months ending October, 1915 and 1914, respectively, follow:

	Month of October				Seven Months ending October.			
	1914.		1915.		1914.		1915.	
	Domestic.	Foreign.	Domestic.	Foreign.	Domestic.	Foreign.	Domestic.	Foreign.
The Mine	\$5,104,440	\$32,345	\$6,669,776	\$231,707	\$31,513,810	\$157,176	\$36,766,306	\$7,034,710
The Fisheries	2,166,972	13,014	2,527,616	17,421	9,924,715	77,983	11,960,689	44,605
The Forest	4,935,715	154,051	5,503,343	52,066	28,917,329	354,103	34,075,344	353,280
Animals and their pro-								
duce	8,537,247	569,918	12,081,545	136,064	41,664,443	1,151,421	57,015,375	1,775,246
Agriculture	17,953,959	4,011,521	39,833,353	2,561,038	75,473,226	32,575,109	99,180,336	17,010,321
Manufactures	7,131,445	754,326	12,880,731	890,770	39,048,724	4,490,481	84,357,550	3,956,293
Miscellaneous	53,664	117,634	542,218	174,417	215,074	2,809,988	3,075,130	873,962
Total merchandise	\$45,883,422	\$5,652,809	\$80,038,582	\$4,063,483	\$226,757,321	\$41,616,261	\$327,430,730	\$31,048,417
Coin and bullion not included in above.								
Dutiable goods	\$21,061,440		\$22,801,957		\$179,645,822		\$147,157,521	
Free goods	14,052,290		16,713,187		107,155,995		105,950,142	
Total	35,113,730		39,515,144		286,801,817		253,107,663	
Duty collected	5,657,871		8,201,830		48,514,957		52,622,863	

BANKRUPT RAILROADS.

A sixth of the mileage of all the railroads in the United States is being operated by receivers, and two-thirds of all the roads in receivers' hands are in the southwest, according to statistics published by *The Railway Age Gazette*. Of the mileage in receivers' hands, almost one-half has been so placed since the beginning of the year. On January 1, 1915, 21,048 miles of road, with a capitalization of \$1,265,328,528

was in receivership, and since that date 20,940 miles, with a capitalization of \$1,298,673,650 has been added to the mortality list, making a total of 41,988 miles, with \$788,616,423 outstanding stock and \$1,475,385,755 funded debt, a total capitalization of \$2,264,002,178. It is said that one of the main reasons for the heavy mortality in the southwest is that the railroads in that section have too large a proportion of their capital securities in the form of interest-bearing obligations.

H. & D. Corrugated and Solid Fibre Board



CONTAINERS will save on your transportation charges, save your floor space, cut down packing expenses, and give you positive protection against loss from damage and pilfering. Write for prices and samples.

The Hinde & Dauch Paper Co. of Canada, Limited, Toronto, Canada

Prevent Costly Interruptions to Power

By Installing Fuse Protection on Service Wires Outside the Factory

TYPE "FF" CONDULET

is a weather-proof, cast-iron fuse box especially designed for this important, but frequently neglected, need.

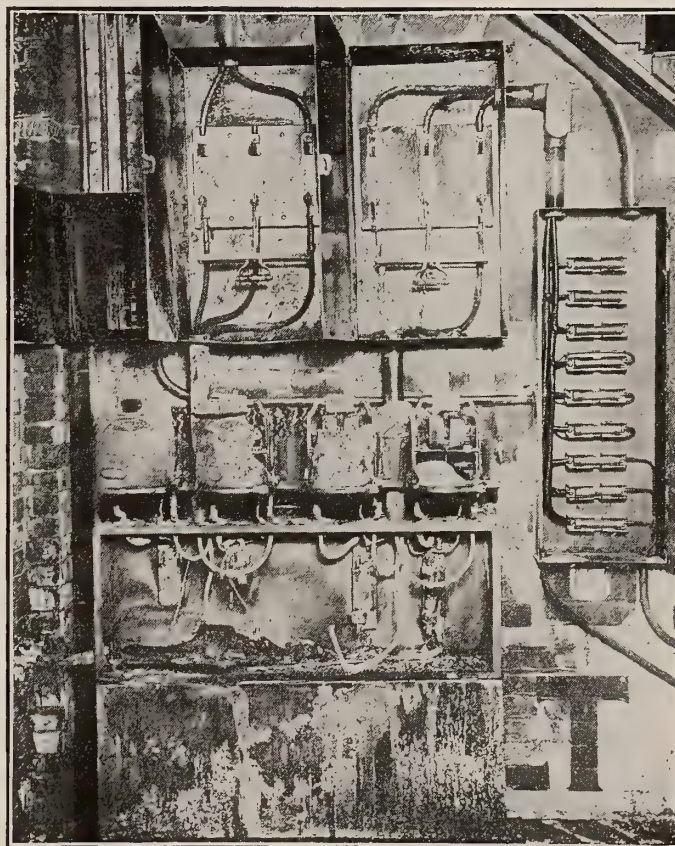
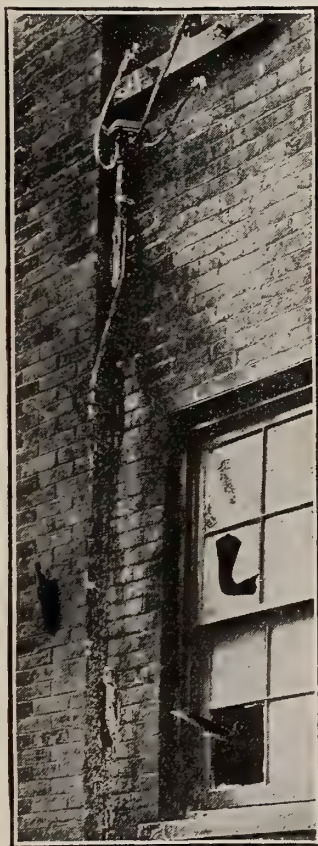
Power companies should gladly co-operate in the installation.



TYPE "FF" CONDULET

has the endorsement of the National Board of Fire Underwriters.

The burn-out shown below, with its days of lost time, could not have happened if a condulet of this type had been used.



Fuses in a Type "FF" Condulet would have Blown and Cut off Current; thus preventing Burn-out.

Catalog No. 1000 and "Condulet Talks" contain information that every owner and manager of electrically operated factories should have. Free copies mailed to any address. Send your request to-day

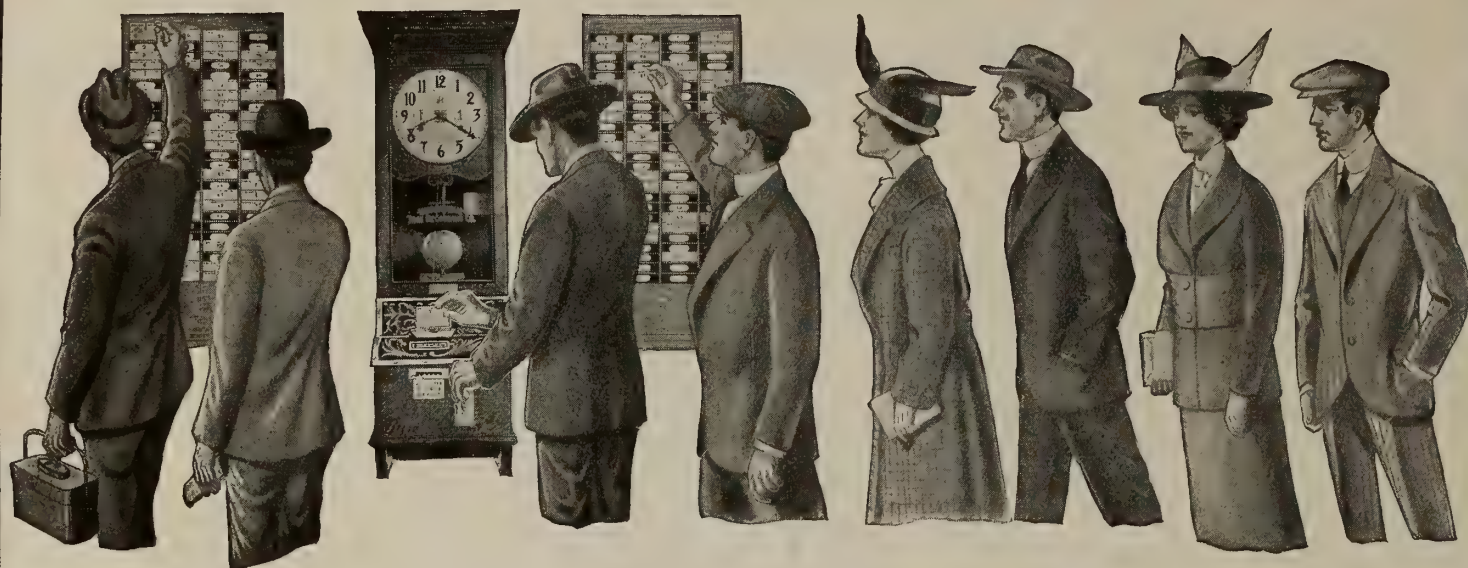
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What can the Manufacturers of Canada Expect from the International Time Recording Company?

TO have any kind of factory, warehouse or office equipped with time recording apparatus that will automatically keep an always-legible, unchangeable and accurate record of each employee's time. Such record serves as an original pay-roll entry.

To have any factory or institution equipped with Secondary Clocks controlled by a Master Clock with full electrical equipment.

To have any plant equipped with the best, mechanical labor-cost-system in the world, with special reference to the "elapsed time" Recorder which gives at a glance the actual time spent on any individual job.

To get the benefit, free of charge, of the advice and experience of a Company with 30 years experience, with the largest output of Time Recording equipment and the longest list of satisfied users in the world.

Remember :--- "It costs more to be without the International Time Recording System than it does to buy it."

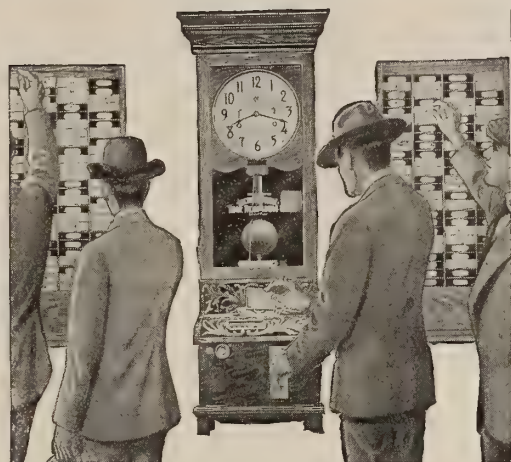
International Time Recording Company of Canada, Limited

Ryrie Bldg., Corner Shuter and Yonge Sts., TORONTO

F. E. MUTTON,
General Manager

Montreal Representative : CHARLES COLE
Cartier Bldg., McGill and Notre Dame Sts., Montreal, Que.

It Stops the Time Leaks!



Can we save you money? Write us and see. We build a time recorder for every business.

Business is good; it is good with us.

What else indicates that business is good?

Labor is in big demands.

Exports largely exceed imports.

Farmers have had good crops.

Stocks of manufactured goods are low.

Factories are busy; many working overtime; many working day and night.

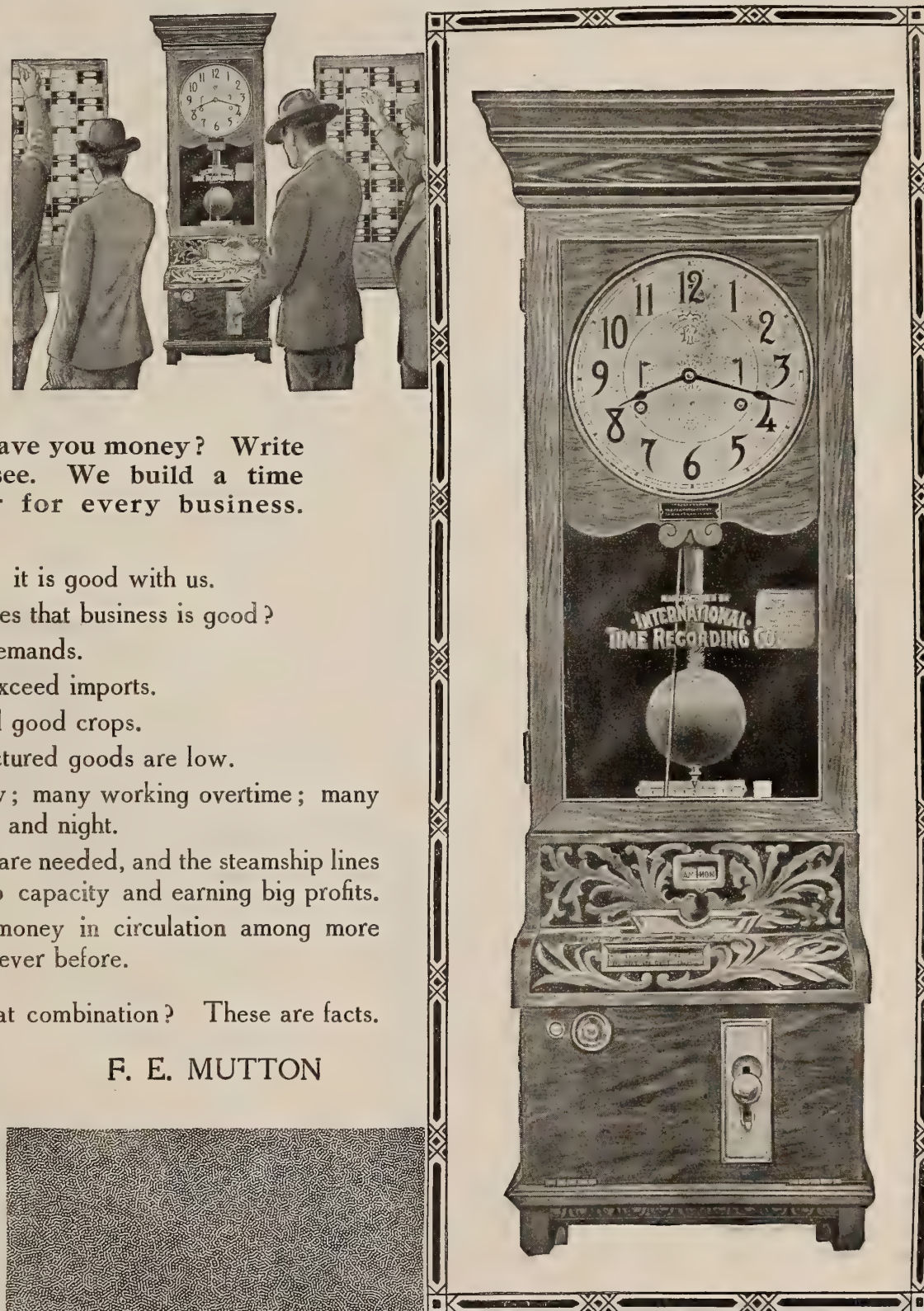
More freight cars are needed, and the steamship lines are taxed to capacity and earning big profits.

There is more money in circulation among more people than ever before.

Can you beat that combination? These are facts.

F. E. MUTTON

Write for illustrated price list and particulars of the International Time Recorder best suited to your business.



The INTERNATIONAL Card Time Recorder Style No. 508 - Completely Automatic

International Time Recording Company of Canada, Limited

Ryrie Bldg., Corner Shuter and Yonge Sts., TORONTO

F. E. MUTTON,
General Manager

Montreal Representative: CHARLES COLE
Cartier Bldg., McGill and Notre Dame Sts., Montreal, Que.

A MARKET WORTH DEVELOPING.

Splendid opportunities exist at the present time for selling manufactured goods in New Zealand. The large excess of exports over imports makes it easy for the New Zealand people to buy what is necessary. The decline in imports has not been due to a shortage of money, but to the disturbed source of supply. Orders have gone forward as a general thing to English houses, only to be turned down for the present, often with a promise to fill them in the near future, if possible. The New Zealand merchant has waited until his warerooms and stores are depleted, and now hardly knows where to turn.

An active effort in the sister state should result in the establishment of profitable trade connections. The manufacturers of the United States are beginning to show renewed interest in this trade. Our manufacturers should not be behind hand in their appreciation of the market.

FIXING THE RESPONSIBILITY FOR FIRES.

Every year—this year, as well—we burn down three or four times as much of Canada's timber as the lumberman cuts. Imagine trampling down four times as much of our corn crop as you haul to your barn! The two cases are parallel, except that the loss of a timber crop costs enormously more to replace. Both actions, however, deserve equal ridicule and condemnation.

More than 12,000 forest fires, large and small, occur in Canada every twelve months—about 1,400 a month between snow and snow. What do such things mean?

They mean that millions of dollars in which you and your family should share are passing into smoke. You cannot bring back a burned forest in a week. Mature timber may redevelop in from 60 to 100 years. Do you feel like postponing your share or your son's share that long? You do not need to. You can put a stop to most of these 12,000 yearly forest fires if you make up your mind that way. Certain parts of the United States, all of Switzerland and France, scarcely know what a big forest blaze looks like. Why? Because the people and their legislators have made up their minds that a forest fire is a common thief, that it robs the woodsman of his employment, robs the farmer of his markets, hurts the fertility of surrounding land, causes both flooding and drying up of streams, and puts up the cost of lumber for every citizen in the land.

A few thoughtless people say: "I am not a woodsman. I do not own a farm. I have no interest in the flow of the streams. I have little occasion to use lumber. Whether the forest stands or falls makes no difference to me."

Let us talk that over! Two-thirds of every dollar taken out of the Canadian forests by lumbermen goes to wages. Those wages buy food, clothing, footwear, and a thousand other things, which in turn contribute to the revenues of railroads and steamboats, and are finally distributed through the whole population for materials and services.

The forest dollar helps to keep you, even if you live in the middle of a treeless plain.

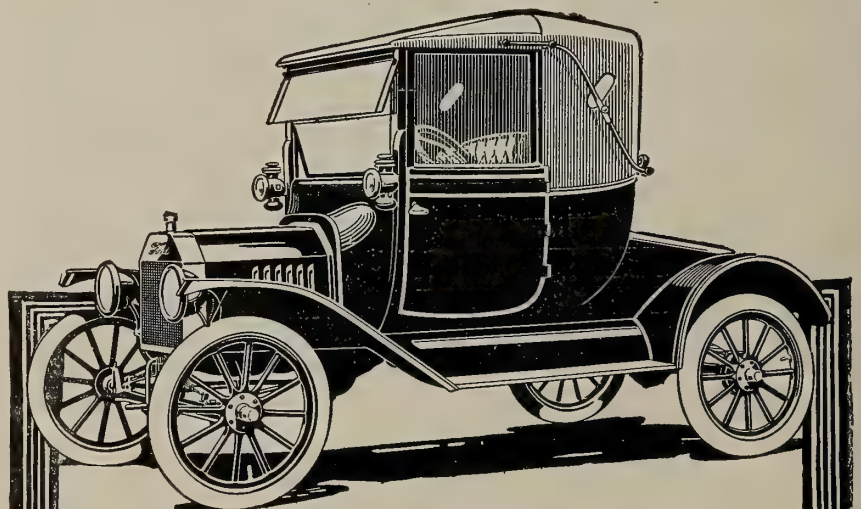
Take away the \$200,000,000 that the Canadian forests pour into the pockets of the country in cash every year, and practically every community would cry "hard times."

You cannot escape the profits of a standing forest and—

You cannot escape the losses of a burned forest!

THE NEXT TRADE INDEX.

In accordance with the custom of publishing the Canadian Trade Index every three years, the next edition will appear in 1916. This volume is now recognized as the authoritative buyers' guide in this country. It is owned by the Canadian Manufacturers Association, is compiled by the Commercial Intelligence Department in co-operation with the members of the Association, and the few manufacturers who do not belong to the Association. Being under such auspices, it is not surprising that the Canadian Trade Index has gradually eliminated all serious competition and retains almost undisputed possession of its own particular field. In regard to the 1916 edition it should be borne in mind that the compilation of the new volume began immediately after the 1913 edition was off the press. Members of the Association can assist the Commercial Intelligence Department by informing it promptly concerning any new articles which are being manufactured and also of any new companies that are being organized in their vicinity. This cannot be an accurate list unless manufacturers are extremely careful in sending in correct information in regard to their products, and their active co-operation in this respect are earnestly solicited by the Commercial Intelligence Department, to which all correspondence on this matter should be addressed.



"MADE IN CANADA"

The Ford Coupelet Price \$730

As a winter car, with top up—as a summer car, with top down—this handsome two-passenger Ford is easily and instantly adaptable to all seasons. And it has all the good qualities of the more than million other Fords now in service.

The Ford Runabout is \$480; the Touring car \$530; the Sedan \$890; the Town car \$780. All prices are f. o. b. Ford, Ontario. All cars completely equipped including headlights. Cars on sale at Ford Motor Company Limited, Ford, Ontario.



When writing advertisers, please mention INDUSTRIAL CANADA.

SOUTH AMERICA BUYING FARM IMPLEMENTS.

Recent export reports show that South America is purchasing agricultural implements from the United States in as large quantities this year as ever before. Large consignments of steel and iron have also been shipped lately to South America. Probably largely because of the war conditions in England, the United States is also selling South America greatly increased quantities of tin plate over any previous period. It is worth the attention of Canadian manufacturers to see to what extent Canada also can enter this field.

WILL MANUFACTURE DORT MOTOR CARS IN CHATHAM.

A company has been organized in Chatham, under the Ontario Joint Stock Company's Act, for the manufacture of Automobiles, to be known as "Gray-Dort Motors, Limited," with an authorized capital of \$500,000, and a paid-up capital of \$300,000. This company will manufacture the car that is now made at Flint, Michigan, by the Dort Motor Car Company.

The officers of the company are as follows:

Robert Gray, of the Wm. Gray-Sons-Campbell, Limited, as President and General Manager; W. M. Gray, Vice-President and Assistant General Manager; J. P. Byers, Secretary-Treasurer. The Directors are: J. D. Dort, of Flint, Michigan; D. M. Averill, of Flint, Michigan; Manson Campbell, Chatham, Ontario; W. R. Landon, Chatham, Ontario.

GOVERNMENT SENDS SPECIAL LUMBER COMMISSIONER TO EUROPE.

The heavy orders for lumber for the United Kingdom placed through the Provincial Government of British Columbia during the past summer, as a result of the visit of Lumber Commissioner MacMillan to Europe, show what results can be obtained by Governmental action in assisting the lumbering industry. In order to follow up the advantage already gained in this new line, the Provincial Government is sending a business representative of the industry to London.

Investigation has already shown that before the European market can be entered, on any scale, by our manufacturers, a great deal of preliminary work must be done in explaining to buyers the qualities and methods of manufacture of our British Columbia woods. There are many misconceptions which are very prevalent and which act as a barrier to the introduction of our lumber products. These can only be overcome by energetic personal work among the buyers by a representative thoroughly conversant with every phase of our lumbering industry. Again, there are many trade requirements which are designed to meet the case of Swedish and Russian lumber, but which are not properly applicable to the

very different timber species of the Pacific coast. In many such cases slight modifications of the customary specifications would not affect the interests of the Old Country buyer in any way, while they would cheapen production here, and so enable the sawmills of this Province to quote lower prices and secure a larger share of this trade. Through general work of this character the Provincial Lumber Commissioner will be of considerable assistance not only in preparing the way for future developments but also by co-operating with the various brokers and agents who represent the interests of British Columbia lumber firms now doing business in the United Kingdom markets. So active has been the campaign conducted by American shippers, and so largely have they increased their representation in Europe recently that the Minister of Lands has decided that a strong effort is necessary to counteract this action and protect British Columbia business.

MALLEABLE IRON CASTINGS

HIGH TENSILE STRENGTH



GALT MALLEABLE IRON CO.

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GALT :: ONTARIO

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PIONEERS OF CANADIAN MADE KRAFT PAPERS

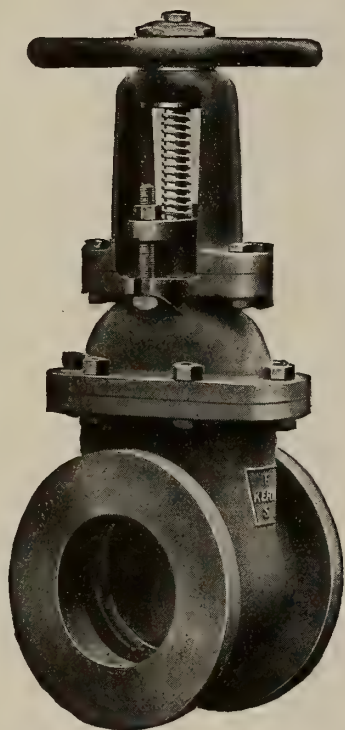
17-19 St. Therese Street - - - MONTREAL

We carry large stocks of Kraft Rolls and Sheets, Brown and Colors—Can supply all grades of paper, Bags and Twines at Lowest Prices.

Agents:—Mansfield Co.'s Watershed Waterproof Papers and Trotter's Scotch Fine Writing and Printing Esparto Papers.

SAMPLES AND QUOTATIONS ON APPLICATION.

Kerr Iron Body Gate Valves



embody all that is modern in gate valve construction.

Strong, compact and pleasing in appearance.

Every valve tested and guaranteed.

THE KERR ENGINE CO., Limited
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ADVERTISING PLAYING CARDS

Office and Works
ONTARIO STREET & PAPINEAU AVENUE
MONTREAL, CANADA

THE BIGGEST MILK BOTTLE.

The accompanying photograph illustrates a new idea in the matter of combining forceful advertising and good fire protection service for industrial concerns.

The milk bottle tank shown was recently built for the City Dairy Company at Toronto, Ontario, by the Canadian Chicago Bridge & Iron Works of Bridgeburg, Ontario, and Chicago, Illinois, to serve as a source of water supply for the automatic sprinkler system of the Dairy Company's plant at Toronto.

The tank and tower is an all-steel structure with a capacity of 25,000 gallons, having an elevation of seventy feet from the ground to the bottom of the tank. The tank itself is



13 feet in diameter and 35 feet 9 inches high, and is an exact reproduction of the Dairy Company's quart milk bottle, one of which was taken as a model in designing the structure.

The purchasers, who were somewhat doubtful as to the practicability of their idea, are very much pleased with the finished product in every way, including outline, general appearance and workmanship.

Though the idea of advertising a company's product by a structure of this kind is entirely new, it is at once evident that it would be hard to find a more striking method of advertising or one more economical, as the huge symbol of the owner's business renders him at one and the same time good advertising and the best of steel tank water service. It is probable that there will be many developments of this unique idea in the near future.

As steel plate construction lends itself readily to work of this kind, it is probable that many other industrial concerns will be taken with the idea, and wish to purchase advertising and fire protection in one and the same bundle.

Dr. O'Connor, of the Mellen Institute, Pittsburg, will speak on "The Smoke Nuisance," at the Physics Building, University of Toronto, on Saturday, December 4th, at 8 p.m. All those interested are cordially invited to attend.

Toronto Sales Office
205 Yonge Street

Acid Open Hearth Steel Castings
for all purposes

Dominion Steel Foundry Company, Limited

Annual Capacity 15,000 Tons

Hamilton, Ontario

"CRANES MADE IN CANADA"



ELECTRIC TRAVELING CRANES

HAND POWER TRAVELING CRANES

ELECTRIC HOISTS AIR HOISTS FOUNDRY EQUIPMENT
NORTHERN CRANE WORKS, LIMITED - - WALKERVILLE, ONTARIO

DELANY & PETTIT, LIMITED

Joint and Veneer
Glue

Always uniform.

OFFICE:

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Special Woodworking
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WORKS:

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WOOL

Noils, Wastes
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Also operating THE YORKSHIRE WOOL STOCK MILLS, TORONTO
Manufacturers of Pulled Shoddies

H. V. ANDREWS Canadian Representative 13 Church St., Toronto



will convince you of this fact :

That it is cheaper to use two files where you now use only one.

Take a certain piece of work and give one man a new file, and another a half worn file on a similar piece of work.

The man with the new file is doing what you are paying him for. The other man is filing away your time.

The man with the new file takes a pride in his work.

The man with the old file starts with a grouch, and the work suffers.

When the inefficient point in the files is reached it is good policy for you to have your men discard them.

And they should be replaced the five famous brands :

**KEARNEY & FOOT
GREAT WESTERN
AMERICAN
ARCADE
GLOBE**

(Made in Canada)

Made in Canada by a plant controlling 90% of the file business.

Backed by 50 years' experience in the making of efficient files.

**Send for your FREE copy
of "File Philosophy" NOW.**

NICHOLSON FILE COMPANY
Port Hope (Dealers everywhere) Ontario

HOW RAILWAY RATES ARE REGULATED IN UNITED STATES.

No more outstanding development has occurred on this continent than that of the railways. Already in Canada we have three systems extending their lines across the continent and having ramifications in every direction where there is the prospect of a car load of freight.

In the earlier days the whole effort of the Governments was directed to the support of the railways. They were lavishly bonused and no detailed supervision was accorded them.

Now the demand is for regulation. In the United States many and varied systems of regulation have been tried. These are discussed clearly in "Railway Regulation," a book which has just been issued by La Salle Extension University, Chicago. To the shipper who is interested in the principles upon which rate making and the general conditions of traffic are based, this new book will prove invaluable.

To quote from the preface:

"An attempt is made to present an analysis of the leading problems in railway economics from the standpoint of government regulation in the United States. While it has been my purpose to vitalize the discussion by the liberal use of concrete illustrative material, the emphasis throughout has been placed upon the discovery of underlying causes and the consideration of fundamental principles.

"The historical development of railway transportation has been traced only in so far as early conditions and past events have been shown to throw light upon the meaning and significance of current practices and present-day problems. The various stages in the growth of the American system of public control, state and national, have been given careful and detailed consideration because the principles and methods of railway regulation, as applied in the United States to-day, are the result of a gradual development. Both legislative enactment and judicial decision have slowly accommodated themselves to the irresistible pressure of our changing social and political ideals and our expanding commercial and industrial needs.

"The vital and inseparable relationship, in railway transportation, between legal rules and business welfare, between railway economics and railway regulation, has served as the source and foundation of the entire analysis and discussion. The ideal of railway regulation is to harmonize, as far as possible, the natural functioning of railway enterprise with the principles and practices of public control."

NEW TWELVE HUNDRED TON SUGAR PLANT.

Construction work has commenced on the new 1200-ton capacity sugar beet plant, to be erected at Chatham, Ont., by the Dominion Sugar Company, Ltd., Wallaceburg. The plant will be one of the largest on the continent and the most modern. All the latest appliances known to science will be used in its equipment. The cost will be approximately \$1,000,000.

Enquiries are now being sent out for machinery. The company states that while much of the machinery will be special, and is only manufactured in the United States, arrangements have been made to purchase everything the company can possibly purchase, that will give equal efficiency, in Canada. As a matter of fact most of the tank equipment has already been purchased in Canada.

The foundation will be constructed at once, and the steel will be erected during the winter, and the company expects to have the plant in operation by October 1st, 1916.

To Parties Manufacturing, or Intending to Manufacture, in Canada

WE are prepared to produce, upon a large scale, articles of metal and wood.

Our facilities are those necessary for the extensive and economical manufacture of the heaviest freight cars and the highest class of passenger cars. These facilities include plants for the manufacture of steel, malleable and grey iron castings—rolled steel and iron products—frogs, switches and track work for electric and steam railways—coil and elliptic springs—forgings—cabinet and other wood work—and all preparatory and finishing adjuncts.

The various plants are distributed from Amherst, N.S., to Fort William, Ont.

Correspondence invited.

Please address Sales Department,
P.O. Box 180, Montreal

Canadian Car & Foundry Company, Limited
Canadian Steel Foundries, Limited
Pratt & Letchworth Company, Limited
Rhodes, Curry Company, Limited

Canada-South Africa Direct Service

Regular monthly sailings from Montreal in Summer and St. John, N.B. in Winter, calling at Cape Town, Algoa Bay (Port Elizabeth) East London, Port Natal (Durban) and Delagoa Bay in the order named.

Sailings 20th of each month.

All steamers fitted with refrigerators for the carriage of perishable freight.

For rates of freight and other information apply to

ELDER DEMPSTER & CO., Limited

318-319 BOARD OF TRADE BUILDING - - MONTREAL

Toronto Agent: S. J. SHARP, 19 Adelaide E.

THE

New Zealand Shipping Company, Limited

CANADA

TO

Australia and New Zealand

Regular monthly sailings from Montreal in summer and St. John in winter, calling at Adelaide, Melbourne and Sydney (Australia), and Auckland, Wellington, Lyttelton and Dunedin (New Zealand). Sailings 20th of each month.

Through bills of lading issued to all points in Australia, New Zealand, Tasmania and other islands of Oceania.

Marine Insurance effected at rates equal to those given from New York.

For rates and other information apply to

**The New Zealand Shipping Co.
LIMITED**

213 Board of Trade Building, Montreal

PROPOSED REGULATIONS FOR SAMPLES AND ADVERTISING MATTER.

Efforts have been made from time to time to obtain more favorable customs treatment for samples of commercial travellers, as well as for advertising matter, imported into Brazil, and it is now stated that the Budget Committee of the Brazilian Chamber of Deputies has reported favorably on a proposal to incorporate in the budget law for 1916 new and more liberal regulations on this subject. If the proposed article is included in the new budget law, which will go into effect January 1, 1916, as now appears probable, commercial travellers in Brazil will be greatly facilitated in the discharge of their business.

According to the proposed legislation, samples accompanying commercial travellers are to be exempt from duty, provided a bond for their re-exportation within such time limit as the customs authorities may prescribe is furnished, or the amount of duty leviable deposited pending such re-exportation. In this respect they are assimilated to articles imported for exhibition purposes, for which the present tariff provides temporary free admission under bond. Samples are to be accompanied by a certificate of origin duly legalized and a detailed list of their number and character. A reduction of 50 per cent. in the duties on illustrated catalogues, circulars, posters, and advertising cards of all kinds is also provided for, and a similar reduction is proposed in the case of articles such as pocket knives, pencil holders, cigarette cases, etc., intended exclusively for distribution as advertisements and bearing on their surface an indication of such destined use.

[At present there is no legal authority, according to a recent report of the Brazilian Minister of Finance, for the temporary free admission of travellers' samples. It has therefore usually been necessary, in order to obtain exemption from import duty, to make the samples entirely unsalable by mutilation or other means, involving considerable delay and inconvenience at the custom house.]—*U. S. Commerce Reports.*

BRITISH INQUIRY FOR ELECTRIC LIGHT CAPS.

In Weekly Bulletin of the Canadian Department of Trade and Commerce No. 600, published July 26 last, a drawing is produced with description of caps, and inquiry in Great Britain indicates that the demand is very large. It is estimated that 21,000,000 lamps are annually produced in the United Kingdom. Export from Germany is cut off and demand for munitions of war has prevented British producers from dealing with the situation. Various prices have lately been paid. Before the war the average appears to have been about 20s. per 1,000 delivered British port. Prices now appear to vary from 25s. to 35s. The name of the firm making inquiry may be obtained from the Department of Trade and Commerce, Ottawa. Refer File A-1737.

FROZEN MEAT TO FRANCE.

A recent shipment from Toronto of 1,250 tons of frozen meat to France has given great satisfaction. Agent-General Reid says the authorities are very pleased with the quality, and, if shipping and prices can be arranged, there are great possibilities in this direction. Canadian stock-raisers are also likely to derive benefit from French requirements with regard to the upkeep of stock strains. Live cattle imported from the Dominion have given satisfaction, and breeders are impressed both with the quality of the animals and their condition after transportation.—*Toronto Mail and Empire.*

Canadian Pacific

WHEN YOU TRAVEL TRAVEL IN COMFORT

"The Canadian Pacific Railway offer to the travelling public service and equipment second to none. They build, own and operate their Compartment Observation Cars, Standard Sleepers, Dining Cars, Coaches and Motive Power."

"The Canadian Pacific own and operate a line of palatial hotels along the Railway from Atlantic to Pacific, thus affording their patrons every possible comfort."

Those contemplating a trip will receive full details and literature on application to any C.P.R. Agent, or write

W. FULTON,
Asst. Dist. Passenger Agent,
TORONTO

M. G. MURPHY,
Dist. Passenger Agent,
TORONTO

TRADE ENQUIRIES

The Weekly Bulletin of the Department of Trade and Commerce, from which some of these enquiries are taken, should be read regularly by those interested in foreign trade. It will be sent free on application to the Department at Ottawa.

254. **Cheap Hosiery, Gloves and Underwear.**—A representative of a large Australian house, handling these lines extensively, is at present in America for the purpose of getting in touch with manufacturers who have quantities of any of the above-mentioned lines to dispose of.
255. **Agency.**—An agent maintaining an office in New Zealand and furnishing satisfactory references is desirous of getting in touch with firms who produce goods suitable for sale to grocers, boot makers, saddlers and bakers.
256. **Drop Forged Spanners.**—An old established English firm is desirous of importing quantities of single and double ended, solid and fluted patterns of drop forged spanners. They furnish Canadian references and ask to have best prices quoted in all sizes and to be accompanied, if possible, with an illustrated list.
257. **Grease Cups.**—An English firm sends us an enquiry for plain grease cups of which they claim to be able to place large orders. They are also interested in other forms of lubricating devices, including automatic drop sight feed oilers for use on gas engines.
258. **Agency.**—A young Canadian maintaining an office in Brazil is desirous of getting in touch with Canadian firms who wish to be represented in that country.
259. **Pianos and Organs.**—A New York export house desires to communicate with Canadian manufacturers of pianos and organs to purchase on New Zealand account.
260. **Windmills.**—A British Columbia export and import house wishes to communicate with firms manufacturing windmills with the object of working up some trade in Oriental countries.
261. **Asbestos Fibre.**—A British Columbia export and import house wishes to communicate with firms manufacturing asbestos fibre with the object of working up some trade in Oriental countries.
262. **Evaporated Milk and Cream.**—A British Columbia export and import house wishes to communicate with firms manufacturing evaporated milk and cream with the object of working up some trade in Oriental countries.
263. **Agency.**—A French agent maintaining an office in Paris is desirous of representing in France, Belgium and Holland, firms making household articles of various kinds, washing machines, hardware, tools, saws, bicycles, etc.
264. **Boots and Shoes.**—A French agent maintaining an office at Lyons, and claiming to be in touch with large dealers in the shoe trade, wishes to represent Canadian firms in France.

FOR

Paper Boxes

==== All kinds =====

Consult

Rudd Paper Box Company, Ltd.

372-374-376 RICHMOND STREET WEST

Toronto, Canada

L. W. MANCHEE, President

W. P. BENNETT, Vice-President

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Its Surface Covering Capacity
With Other Brands

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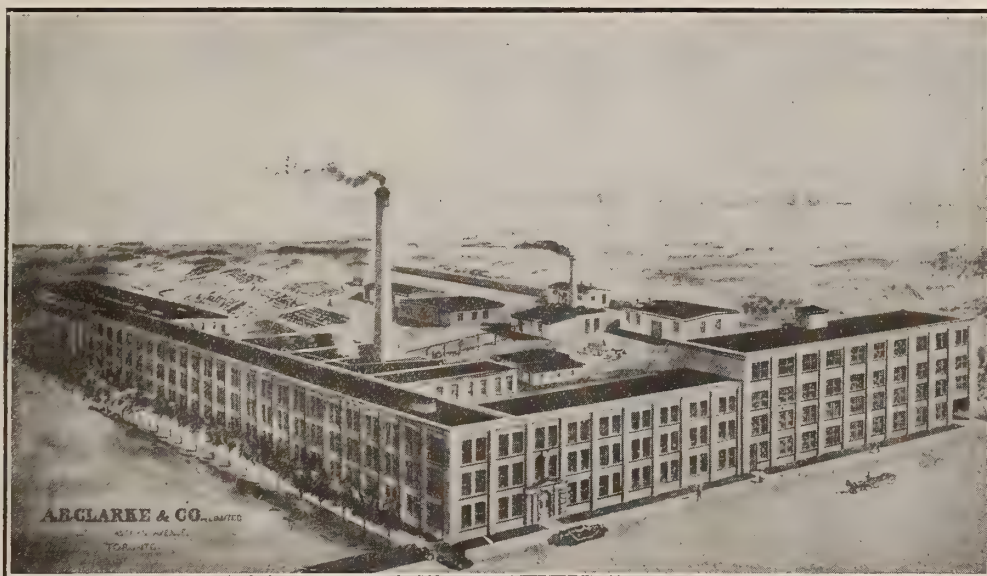
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SYDNEY
Martin's Chambers, Moore St.

AUCKLAND
34 Fort Street

CHRISTCHURCH
———St.

633-661
EASTERN
AVENUE



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The Largest Patent Leather Manufacturers
in the British Empire

A. R. CLARKE & CO., LIMITED

MONTREAL

TORONTO

QUEBEC



Canadian Manufacturers OF OVERALLS, SMOCKS

**Working Shirts
House Dresses, Nurses'
Uniforms, Children's Frocks**

and other garments of this class can put more value into their products, without increasing costs, by using Dominion Textile

**"Rockfast" Drills
and
"Steelclad" Galateas**

instead of imported fabrics. Our cottons, "Made in Canada," carry no duty—give more value at a price than any imported goods—and are the logical raw materials for "Made in Canada" garments.

Dominion Textile Co.

Limited

Montreal—Toronto—Winnipeg

Operating Twelve Mills;
Employing Ten Thousand People.

Manufacturing White and Grey Cottons, Prints, Sheetings, Shirtings, Pillow Cottons, Longcloths, Cambrics, Ducks, Bags, Twills, Drills, Quilts, Bureau Covers, Towels and Towelling, Blankets, Rugs, Twines and many other lines used by Manufacturers in Rubber and other Trades.

265. **Agency.**—A manufacturing jeweller in the State of Colombia, South America, desires to get in touch with Canadian manufacturers of products suitable to be handled in connection with his other lines.
266. **Paste for Paper Making.**—A Spanish agent, giving New York references, wishes to get in touch with manufacturers of the above article.
267. **Bent Wood and Opera Chairs.**—A well-known New York house has an opportunity to offer to Canadian manufacturers of these articles.
268. **Locust Bean Powder.**—An English manufacturer is desirous of ascertaining if any supplies of this material are available in Canada. A small sample can be supplied.
269. **Pulp for Manufacturing Paper.**—A firm of commission merchants in Barcelona, Spain, desires to correspond with Canadian manufacturers of pulp for manufacturing paper. Good references offered.
270. **Broom Handles, Washboards, Pegs, Etc.**—A London firm of general merchants dealing in woodenware asks to be placed in touch with Canadian manufacturers of broom handles, washboards, pegs and similar lines.
271. **Whisk Brooms and Brushes.**—A firm in England asks to be placed in communication with Canadian manufacturers of whisk brooms and brushes.
272. **Incubators.** An agent at Palermo, Italy, wishes to represent in Sicily, makers of incubators for poultry rearing. P. I. C.
273. **Sundries, Brass Smallwares, Etc.**—A toy manufacturer at Bologna wishes to hear from Canadian makers of the above. B. A. L. M.
274. **Paraffin Paper.**—A correspondent at Turin wishes to buy paraffin paper.
275. **Hospital Supplies.**—A St. John's firm desires to be put into touch with Canadian manufacturers of enamelled steel hospital supplies.
276. **Tools and Paper.**—A Durban firm of merchants, who also act as commission agents, are anxious to be put in touch with Canadian manufacturers of the following articles: Miners' shovels, picks (two weights required, 2½ pounds and 3 pounds); handles, good quality maple or oak; brattice cloth; wrapping paper, of which the size must be 29 inches by 45 inches, in two weights, one 40 pounds per ream and the other 56 pounds per ream; grease-proof paper in sizes 20 inches by 30 inches and must weigh about 18 pounds per ream; vegetable parchment paper, size required, 23 inches by 36 inches.
277. **Rubber Boots and Shoes.**—A firm in Glasgow having a large wholesale connection, prepared to furnish satisfactory bank references, wishes to obtain the agency of a Canadian exporting house.
278. **Leather.**—A London firm asks to be placed in touch with Canadian manufacturers of dressed and patent leathers, in calf and sides, also glaze kid, sole leather, etc., which they are prepared to handle upon a commission basis or to purchase outright.

DOON TWINES

LIMITED
DOON, ONT.

Manufacturers of Fine Mat-
tress, Tufting and Stitching
Twines from flax and hemp

We also supply flax and
hemp yarn for weaving

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MANUFACTURERS OF

WHITE VICTORIA
LAWNS

WHITE NAINSOOKS

and

DYED COTTONS

OF EVERY DESCRIPTION

PEN-ANGLE

The
"Trade-Mark"
of Quality

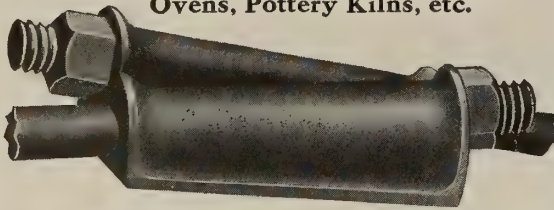


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Hosiery and
Sweaters

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PARIS, CANADA

LUGS FOR BANDS

On Silos, Tanks, Water Pipes, Penstocks
Ovens, Pottery Kilns, etc.



Ask
for
Price
List

For round Rods $\frac{3}{8}$ to $1\frac{1}{2}$ inch

Flat Bands 2 to 6 inches wide

Best Malleable Iron—Prompt Shipments.

OTTERVILLE MFG. CO., LIMITED
OTTERVILLE, ONT.

EXPORTERS OF

Reed Organs, Piano Stools,
Music Cabinets.

Catalogue B.



The Goderich Organ Co. Limited
GODERICH, CANADA



Closet Seats,
Flush Tanks,
Medicine Cabinets,
Everything for the Bath Room.
Write for Catalogue C. and Price List.

Cable Address : DANMANCO

The Danville Manufacturing Co. Limited

Manufacturers of

WOODEN SHOE SHANKS
BROOM HANDLES, SKEWERS
PAPER ROLL PLUGS, &c.

Danville, Que.

Users of Paper Roll Plugs will do well to ask us
for quotations.

279. **Pails and Drums.**—A Cape Town firm makes inquiries regarding supply of wirebound pails or drums suitable for repacking. Further particulars can be obtained from the Department of Trade and Commerce, Ottawa.

280. **Tools, Woodenware, Ironmongery.**—A British firm is open to purchase mechanics' hand tools; wooden handles of all kinds, dowels and washboards, and desires to hear from Canadian manufacturers of twine, nuts and bolts, screws and wire nails.

281. **Crepe Paper Serviettes.**—A London firm asks for names of Canadian manufacturers of crepe serviettes of paper.

DOMESTIC TRADE ENQUIRIES.

282. **Manganese Ore Pulverizers.**—A Toronto firm wishes to obtain the names of firms who would undertake the grinding and pulverizing of manganese ore.

283. **Kid Binding.**—A shoe company is desirous of ascertaining where kid binding suitable for binding canvas shoes can be obtained in Canada. A small sample can be supplied.

284. **Narrow Webbing.**—A Canadian manufacturer is desirous of getting in touch with firms able to supply $\frac{3}{4}$ -inch black non-elastic webbing. Small samples can be supplied.

WILL REPRESENT MANUFACTURERS IN WINNIPEG

We are prepared to handle the lines of one or two more manufacturers in Winnipeg and through the West, on a commission basis. We are wholesale dealers in Builders' Supplies and Specialties. Having been established for several years, we are in a favorable position to give a satisfactory service. Correspondence invited.

BRAID & McCURDY - WINNIPEG

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THE BEST STEEL LOCKERS MADE IN CANADA

MADE BY
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BARRISTERS, SOLICITORS, etc.

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TORONTO
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THE CANADIAN APPRAISAL COMPANY LIMITED

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ROYAL BANK BLDG.



NEW YORK
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THIS is a year in which investment costs, values and depreciation will have more significance and will receive greater attention than ever. It is an opportune time for you to know exactly what your plant is actually worth as a going concern.

This can only be known by having an appraisal of your properties.

Our appraisal and continuous service will be of great practical value to you as a standard work of reference in the operation of your business by establishing a sound, authoritative basis of costs and values for operating, accounting, cost finding, taxation, insurance and financial purposes.

The Canadian Appraisal Company, having appraised over 1500 properties in Canada, is in an unique position to understand and meet your requirements.

Valuations for

MUNICIPALITIES - PUBLIC UTILITIES - RAILWAYS

McClary's

Specialists in

HOTEL AND INSTITUTION KITCHEN APPLIANCES

and Manufacturers of the "FAMOUS" line of Goods including

Coal and Wood
FURNACES

Coal, Gas and Wood
STEEL AND CAST RANGES

Coal, Gas, Wood and Oil
HEATERS

ENAMELWARE, TINWARE AND OTHER KITCHEN WARE

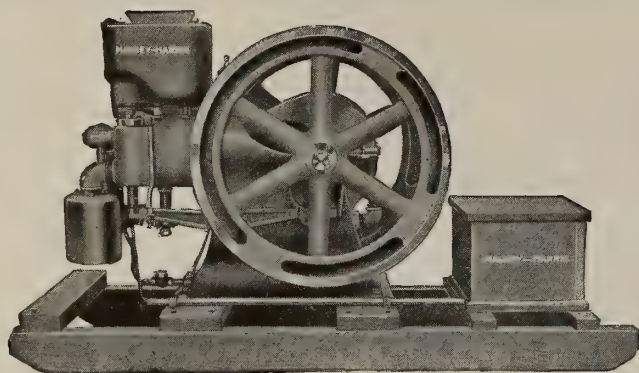
LONDON
MONTREAL
VANCOUVER

TORONTO
WINNIPEG

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CALGARY
EDMONTON

HAMILTON
SASKATOON



MASSEY-HARRIS GASOLINE ENGINES

For the Contractor and Builder

FOR construction work of various kinds, a Massey-Harris Gasoline Engine will be found most useful. Above is shown one of our Engines mounted on skids, and below is an Engine connected direct to a Diaphragm Suction Pump. Both of these combinations are very handy.

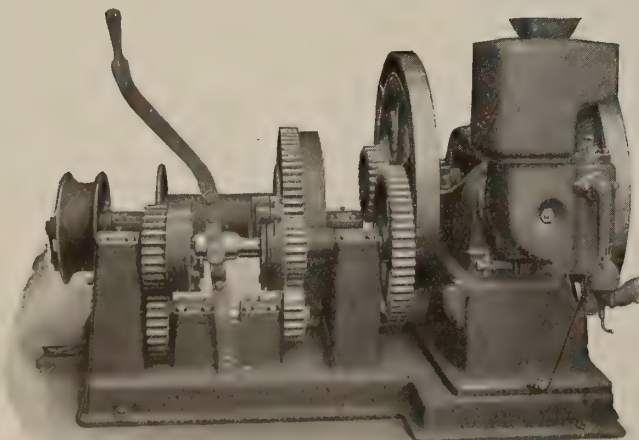
The Massey-Harris Contractor's Hoisting Outfit is an indispensable part of the contractor's equipment. The engine is geared direct to the Hoisting Drum, although when required for other purposes it can be detached.

These Engines are also furnished in Portable outfits, from 4½ horse power up, mounted on steel-wheeled trucks. A reputation for reliability, economy and convenience is what Massey-Harris Gasoline Engines have won for themselves throughout Canada and the United States, and every one sold brings in somebody else who wants one.

Information as to dimensions and prices of Engines may be had from any Massey-Harris Agent, or by writing direct to any of our Branches.

MASSEY-HARRIS COMPANY, LIMITED
HEAD OFFICES, TORONTO, CANADA

Branches at
Toronto Montreal Moncton Winnipeg Regina
Saskatoon Yorkton Calgary Edmonton
Agencies Every where



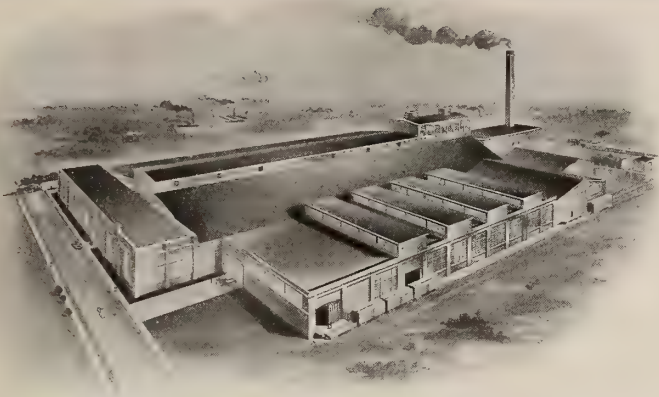
285. **Machinery and other Canning Materials.**—A Saskatchewan company is desirous of finding where machinery and other materials used in the canning industry can be obtained.
286. **Distillers' Apparatus.**—A Nova Scotia firm wishes to get in touch with companies making distillers' apparatus.
287. **Shell Tools.**—A Canadian manufacturer wishes to obtain the names of firms capable of supplying 2-inch tools such as are used in the manufacture of shells.
288. **Valves.**—A British Columbia firm would like to hear from Canadian manufacturers of regulating valves for welding plants.
289. **Calendar Mats or Mounts.**—A Quebec firm is desirous of supplanting foreign importations with Canadian products in this line.
290. **Enamelled Handles.**—A Canadian manufacturer wishes to know where he can obtain supplies of enamelled handles for rubber stamps.
291. **Plaster Statue and Toy Moulds.**—A Hamilton concern wants to obtain moulds suitable for use in the manufacture of small and large statues, animals, toys, etc.
292. **Grain Grinders.**—A patentee holding a patent on a grain grinder wishes to bring it to the notice of manufacturers of these machines.
293. **Laboratory Equipment.**—A United States firm considering the establishment of a Canadian plant wishes to hear from Canadian manufacturers of glass for laboratory use, scales, candy makers' furnaces, paint mills and also from tinsmiths and coppersmiths.

TRANSFER OF FREIGHT VIA PANAMA.

Referring to the circular issued on October 8, advising that, in view of the closing of the Panama Canal by slides, ships waiting at the Isthmus to transit the canal would, as far as practicable, be permitted to transfer freight across the Isthmus by rail at \$3 per ton, including all charges, it has been decided to continue exchanging cargoes of ships arriving at the canal during the month of October at the special emergency rate quoted above.

Effective with arrival of ships at the Panama Canal on and after November 1, 1915, and during such times as the canal may be closed to traffic, the Panama Railroad will transfer freight across the Isthmus at the following rates per ton of 2,000 pounds: Class 5, \$2; class 4, \$2.50; class 3, \$3.50; class 2, \$4.50; classes 1 and D½, \$5.50; classes D1 and D1½, \$10; classes D2 and T1, \$15. Rates on specie, gold, silver, precious stones, etc., one-fourth of 1 per cent. ad valorem. Steamers will be charged wharfage, craneage, and for stevedoring of their cargoes in and out. The above classes are based on the Panama Railroad Co.'s present local classifications, the rates being reduced as indicated.

All inquiries regarding the above-mentioned rates or as to other questions relating to transfer of cargo, etc., should be addressed to the Panama Railroad Co., 24 State Street, New York, N.Y., or to the Governor of the Panama Canal, Balboa Heights, Canal Zone.



SHAFTING

Cold Drawn, Cold Rolled
Turned and Polished Steel
FINISHED KEYS

The Canadian Drawn Steel Co., Ltd.
HAMILTON, CANADA

UNION DRAWN STEEL CO., Limited

HAMILTON, ONTARIO

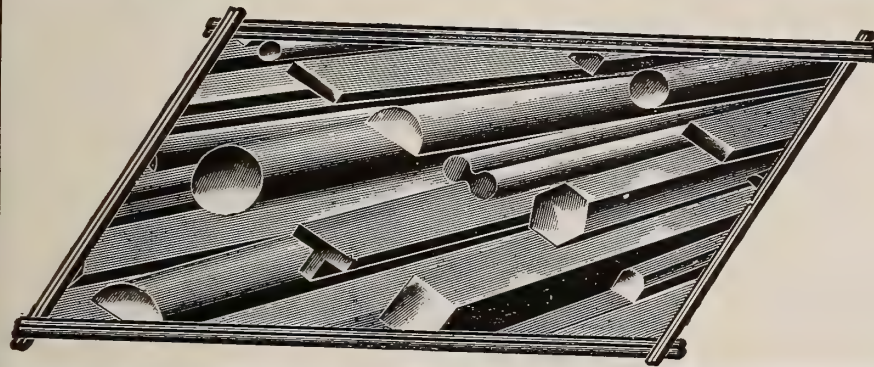
MANUFACTURERS OF

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Rounds, Flats, Squares
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LARGEST STOCK IN CANADA

Get prices before ordering elsewhere.



**COTTON
& WOOL
WASTE**

Made in Canada

BRANDS:

Cotton Polishing: Cream.

White Cotton Wiping:

XXX Extra, X Grand,
XLCR, X Empire, X
Press.

**WASHED
COTTON
WIPERS**

Colored Cotton Wiping: Fancy, Lion, Standard,
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Wool Packing: Arrow, Axle, Anvil, Anchor.

Washed Cotton Wipers: Select White, Mixed Colored,
Dark Colored.

Packed in Compressed Bales 500, 200, 100, 50, 25, 10, 5 lbs.

No liquid dope or clay used in any of our brands—nothing but threads.

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how to reduce
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80%.

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PURDY, MANSELL LIMITED —TORONTO—

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Automatic Fire Sprinkler System

throughout your Factory, Store or Ware-
house.



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Correspondence Solicited

AMONG THE INDUSTRIES

We direct the attention of our readers to this department, which has greatly enlarged and improved. Arrangements have been made to secure interesting news of manufacturing from all parts of Canada. We shall be glad to publish items of interest to manufacturers free of charge in this department provided they should not be properly classified as advertisements. If you have interesting items please send them in.

BRITISH COLUMBIA.

Alert Bay, B.C.

The British Columbia Packers' Association, Vancouver, are considering the erection of a cannery, at an approximate cost of \$20,000. Work will probably start about the beginning of next year.

Armstrong, B.C.

A vegetable evaporating plant is being installed here, the machinery for which has arrived. The plant will be in operation within a month.

An up-to-date creamery is to be established here, taking over the interest of Slater's Creamery.

Cheam, B.C.

The Cheam Lime Co., Ltd., have acquired extensive lime deposits on the Fraser River and have erected special buildings and equipment for the manufacture of lime for commercial and agricultural purposes.

Grand Forks, B.C.

The J. W. Graham Company are making arrangements for the establishment of a vegetable evaporating plant and have made contracts for two thousand tons of potatoes. The company's plant at Vernon is already in operation, with considerable orders on hand for desiccated vegetables of various kinds for shipment to Europe.

Greenwood, B.C.

The B.C. Copper Company is planning to expend \$1,000,000 on improvements on their properties at Greenwood.

Hedley, B.C.

The Daly Reduction Co. have, during the past few months, made considerable additions to their plant and equipment. During the past year the company have installed a 2,000 h.p. hydro electric plant which was placed in commission in February of this year.

Revelstoke, B.C.

The Diamond Match Co. have given a contract to a local logging contractor for 1,000,000 feet of logs.

Vancouver, B.C.

Military orders received during the past month by Vancouver manufacturers include the following: sweaters, 19,000; boots, 20,000; army braces, 20,000; shell boxes, 78,000.

A syndicate for the manufacture of aeroplanes has been formed and have leased a factory in which the requisite machinery is being installed. Local spruce will be used in the construction of the planes, for which it is stated substantial orders have been arranged.

HAVE YOU ENLISTED THE AID OF MANUFACTURERS AUTOMATIC SPRINKLERS



TO HELP YOU

Protect your Building
from fire and to reduce
your Insurance Rates?



If not, write us and we
will tell you how they
pay for themselves in a
few years.

The **General Fire Equipment Co.**
LIMITED

72 Queen St. East

Toronto, Can.

"Metallic" Building Materials

Instead of lath, wood and plaster on your
office and factory walls, use

"Metallic" Ceilings and Wall Plates

They make a beautiful, clean, sanitary and
fire-retardent covering that is practically
everlasting. Our newest patterns are really
"works of Art." Let us send you illustra-
tions and price lists.

"Eastlake" Galvanized Shingles

"Metallic" Siding

"Empire" Corrugated Iron

Skylights; "Metallic" Lath; Cornices
Ventilators, etc.

The Metallic Roofing Co., Limited
Manufacturers
TORONTO WINNIPEG



MADE IN CANADA

Canadian Hart Wheels

CUT FASTER LAST LONGER

Than any other wheels on the market

Tell us the service you want
performed and we will supply
you with an abramer that will
save you time, money and worry.

Send for one of our catalogues
and tell us your troubles. We
do the rest. :: :: :: ::

CANADIAN HART WHEELS LIMITED
450 BARTON ST. EAST

Hamilton

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Ontario

Are You Sure Your Electrical Wiring is Safe?

There is but one absolutely safe
method of wiring. Instal a
CONDUIT SYSTEM, it will
eliminate all risk of Fire.

"Galvaduct" & "Loricated"
"Conduits"

HAVE NO EQUALS

Conduits Company Limited
TORONTO MONTREAL

NOTICE TO STATIONARY AND HOISTING ENGINEERS

Everyone operating a STATIONARY steam plant of 50 h.p. or over in the Province of Ontario must hold a Stationary Engineer's Certificate from the Board of Stationary and Hoisting Engineers. Anyone operating such a plant without a Certificate is liable to the penalties set forth in the Stationary and Hoisting Engineers' Act.

Everyone operating a HOISTING steam plant working at a pressure of 20 pounds or over irrespective of horse power, and used for hoisting in structural operations or excavating purposes, in the Province of Ontario, must hold a Hoisting Engineer's Certificate from the Board of Stationary and Hoisting Engineers. Anyone operating such a plant without a Certificate is liable to the penalties set forth in the Stationary and Hoisting Engineers' Act.

Application forms for obtaining STATIONARY or HOISTING Engineers' Certificates, may be had upon applying to the Chairman.

Hon. JAS. S. DUFF,
Minister of Agriculture.

W. C. McGHIE,
Chairman of Board.

NOTICE

The following are the Factory
Inspectors for the Province of
Ontario:



JAS. T. BURKE, Chief Inspector, Parliament Buildings, Toronto.
H. A. CLARK, 432 Woodman Avenue, London.
A. W. HOLMES, Parliament Buildings, Toronto.
ROBERT HUNGERFORD, Parliament Buildings, Toronto.
MISS MARGARET CARLYLE, Parliament Buildings, Toronto.
MRS. A. BROWN, Parliament Buildings, Toronto.
THOMAS KRILTX, 25 Russell Avenue, Ottawa.
S. J. MALLION, 214 Wellington Street, Stratford.
FRED KELLOND, 157 Wellington Street South, Hamilton.
H. J. TUTT, 13 Enderby Road East, Toronto.

Persons having business with any of the Inspectors will find them at the above address. HON. JAS. S. DUFF, Minister of Agriculture. Phone Main 5800.



NOTICE To Manufacturers, Dealers and Users of Steam Boilers.

All steam boilers built in, or entering the Province of Ontario, and boilers exchanged or repaired, are subject to Government Inspection as prescribed in the Steam Boilers Act, 3 George V., C. 61.

Before any work of repair or alteration is commenced on any boiler, notice must be sent to the Department stating the nature and extent of the repairs or alterations proposed to be made. If the Chief Inspector should consider such repairs or alterations of an extensive character, the boiler must be inspected in accordance with the Regulations by an Inspector authorized under the Act.

All communications should be addressed to the Steam Boiler Branch, Department of Public Works, Parliament Bldgs., Toronto.
HON. FINLEY G. MACDIARMID, D. M. MEDCALF,
Minister of Public Works. Chief Inspector of Steam Boilers.



Canadian
Chicago Bridge & Iron Works
Bridgeburg, Ontario

**ELEVATED STEEL TANKS
AND STANDPIPES**

For Municipal, Railroad
and Factory Service

We also build Oil Tanks, Coaling Stations, Bridges, Turntables, Buildings and Structural Material. Write for illustrated Catalogue No. 25.

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Chicago, Ill., 1316 West 105th St.
New York, 3132 Hudson Terminal Bldg.

Shops:

BRIDGEBURG, ONTARIO
Greenville, Pa. (Pittsburg District)
Chicago, Illinois

A gang of mechanics and engineers has gone north to the plant of the Ocean Falls Company to effect necessary repairs and additions preparatory to the reopening of this extensive pulp and paper plant under the new ownership.

The work of filling in forty-two acres of tide flats in False Creek by the Vancouver Harbour Commission is proceeding rapidly, and the area will be ready for the erection of buildings by May next. Applications for more than the whole space have already been received from a number of industrial concerns.

Victoria, B.C.

The Canada Potash and Algin Co., Ltd., have commenced operation of their kelp reduction plant at Sidney for the manufacture of potash, algin, iodine, bromine, fertiliser and by-products. There are vast beds of kelp available along the coast. The plant is the first one to be operated under the provincial Act passed last session to enable such industries to be worked.

The Imperial Oil Company is establishing a plant at McLaughlin Point, at a cost of \$125,000. The equipment will include a 250-foot wharf, seven storage tanks, and other buildings.

Large shipments of shooks for sugar boxes have recently been made to Great Britain.

MANITOBA.

The Pas, Man.

A by-law will be submitted to the ratepayers in December providing for the installation of a telephone system at an approximate cost of \$12,000.

NEW BRUNSWICK.

Nelson, N.B.

Work will commence as soon as possible on the large saw-mill to be erected here by Frasers, Limited, Fredericton, N.B. The approximate cost will be \$100,000.

Salisbury, N.B.

Eben Lewis is in the market for equipment for the saw and shingle mill which he has commenced.

NOVA SCOTIA.

Eureka, N.S.

Work will probably start shortly on the plant of the Nova Scotia Underwear Company, which was recently destroyed by fire.

Halifax, N.S.

Plans have been drawn for a factory to be erected for Brandram-Henderson, Limited, at an estimated cost of \$3,000. The company will purchase machinery for the manufacture of bullets.

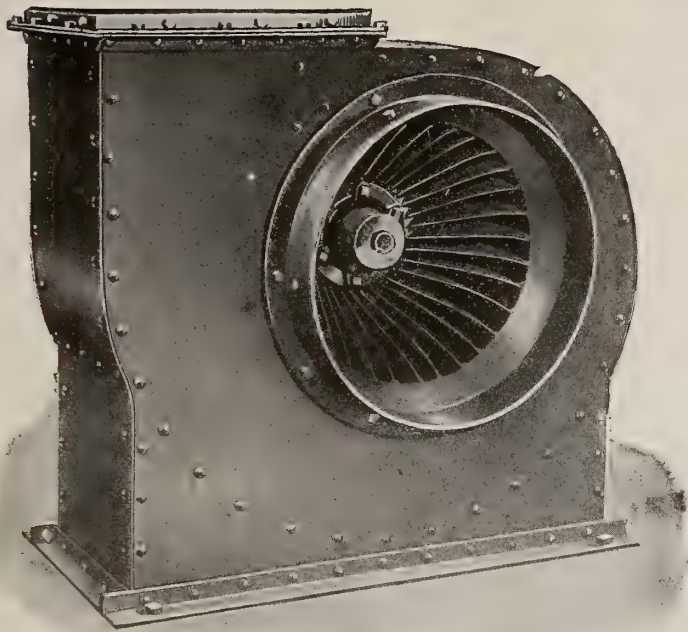
ONTARIO.

Berlin, Ont.

Work has been started on the erection of a factory for Armbrust & Inrig.

Cornwall, Ont.

A storage warehouse for Canadian Cottons, Limited, 28 Victoria Square, Montreal, has been commenced by Anglins, Limited, Montreal. The estimated cost is \$50,000.



Keith Fans

For Heating and Ventilating

When it comes to a question of Heating and Ventilating the Factory, Church, School or Public Building, it is imperative that you should select the best and most approved system. The "**Keith**" Fan is specially distinguished for giving greater volume with less power than any other Fan made. Get our Keith Fan Catalogue No. 55 and judge for yourself.

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Fuel saving from 15% to 25% interests most steam plant owners.

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E. Leonard & Sons, St. John, N.B.
Robt. Hamilton & Co., Vancouver, B.C.
Kelley-Powell Limited, McArthur Bldg., Winnipeg

Essex, Ont.

The Town Council have appointed a Committee to investigate the cost of installing a Hydro-Electric system.

Forest, Ont.

The Town Council are considering the installation of a Hydro-Electric lighting and power system.

Fort William, Ont.

Plans have been drawn for a warehouse to be erected for the Lake of the Woods Milling Company, at a cost of \$4,000.

Granton, Ont.

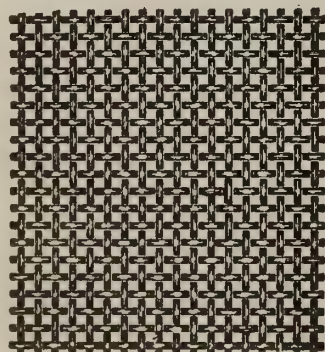
A by-law has been carried authorizing the Town Council to enter into a power contract with the Hydro-Electric Commission. The installation of the system is estimated to cost \$5,000.

Hamilton, Ont.

Masonry, carpentry, steel and roofing contracts have been let for the erection of an addition to the premises of the Acme Stamping Tool Works.

Lion's Head, Ont.

The Lion's Head Flour Milling Company are considering the rebuilding of their mill.

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SHEET METAL
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London, Ont.

The Middlesex Mills, Limited, have decided not to erect a building, but have rented premises and will install machinery.

The London Printing and Lithographing Company are about to start work on the reroofing of their factory.

A telephone system to connect the main offices with all water and electric sub-stations is proposed by the Utilities Commission.

The Carbex Brick Company are considering the installation of rotary kilns.

A factory for the manufacture of paper boxes will shortly be erected by H. T. Reason.

Niagara Falls, Ont.

A by-law has been carried providing for the issue of debentures to the amount of \$14,000 for the purchase of machinery and equipment for the town electric station.

Norwich, Ont.

The purchase of general equipment for a modern garage and auto repair shop is being considered by Hoffman & Nethercott.

Peterborough, Ont.

The mattress factory owned by James Ellis and Bruce Quinn has been destroyed by fire. Loss, \$5,000.

Petrolia, Ont.

Fred Howlett, Shuttleworth Tile Yard, has purchased a site and intends to erect a brick and tile manufacturing plant.

The Town Council are having plans prepared for a transformer station, estimated to cost \$5,000.

THE ROYAL BANK OF CANADA

Incorporated 1869

Capital Authorized . . . \$25,000,000
Capital Paid up . . . \$11,560,000
Reserve & Undivided Profits \$13,000,000
Total Assets . . . \$180,000,000

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NEW YORK AGENCY—Corner William and Cedar Sts

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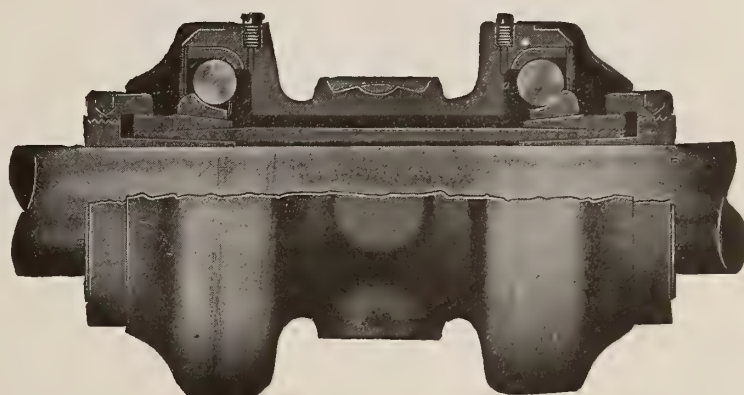
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Your present line shafting is consuming from 15% to 60% of your power.

The Chapman Double Ball Bearing will save this waste and turn it into productive energy.

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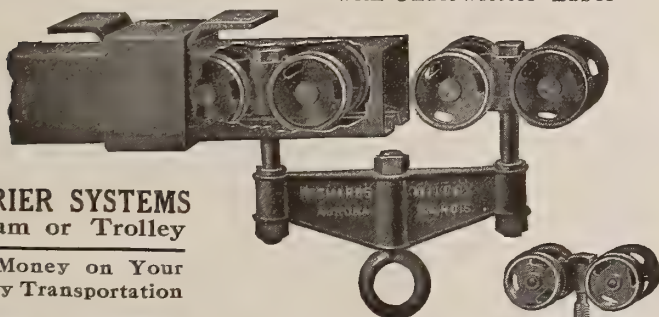
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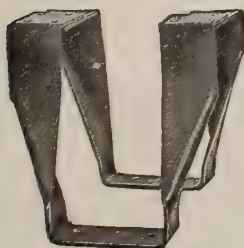


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They never let go!
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"R-W" HANGERS and Carrier Systems are specified by leading architects and engineers throughout Canada and the United States. Catalogues and estimates will be cheerfully furnished.

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Trolleys
are best for
all sliding
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Can supply every Canadian Manufacturer and Jobber with their entire requirements of Steel and Brass Compression GREASE CUPS, Plain, Ratchet or Leather Washer Types, any finish desired. Also all styles of Oil Hole Covers.

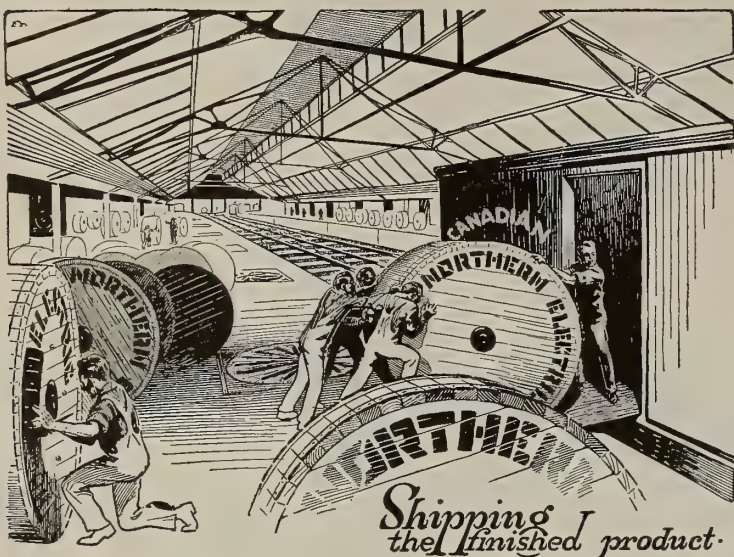
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Hinge Lid Pressed Brass Oil Cup

With Syphon Feed, if desired. No order too large to ship from stock. Anything special you have been importing we will gladly make to your order. If your Jobber can't supply you with WINKLEY Cups write us for prices and Catalogue.

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Toronto
Winnipeg

Regina

Calgary
Edmonton

Vancouver
Victoria

Port Dover, Ont.

At an approximate cost of \$10,000 the Port Dover Canning Company contemplate the erection of a new factory.

Prescott, Ont.

The purchase and enlargement of premises for factory purposes is being considered by the Newel Manufacturing Company, Ogdensburg, N.Y. A by-law to exempt the company from taxation will be submitted to the ratepayers.

Preston, Ont.

An addition will be made to the factory of the Solid Leather Shoe Company at an early date.

Southampton, Ont.

The matter of securing estimates on the installation of a Hydro-Electric system will be submitted to the ratepayers by the Town Council.

Toronto, Ont.

Work is progressing on the erection of a brass foundry for Canadian Hanson & Van Winkle Company, Limited.

The general contract for the erection of an addition to the factory of R. J. Henderson, Lumsden Building, has been let to R. H. Harman & Son, Dupont Street.

West Lorne, Ont.

The West Lorne Motors, Limited, propose to manufacture gasoline tractors, and will probably purchase new machinery for this purpose in the near future.



has stood unchallenged for
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*Try this metal and prove
it for yourself*

Tallman Brass & Metal Co.
HAMILTON, ONT.

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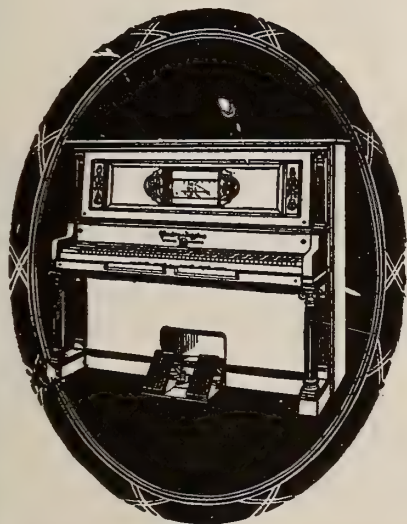
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One Toronto manufacturer tells of this pleasure in a Gourlay-Angelus as follows:—"I have always been glad I purchased the Gourlay-Angelus. The longer I have it the more I enjoy it and the more I use it."

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Illuminated Addresses
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ZINC, WOOD,
ELECTROTYPING**

**J. L. JONES
ENGRAVING CO. LIMITED**

**133 RICHMOND
STREET WEST
TORONTO
CANADA**

Woodstock, Ont.

Contract for the erection of an addition to the machine shop of W. Baird & Son has been awarded to J. D. Tindall & Son.

QUEBEC.**Montreal, Que.**

Work has been started on the erection of an addition to the factory of the Canadian Consolidated Rubber Company. The estimated cost is \$3,000.

The Standard Steel Company, Limited, are considering the erection of an addition to their plant.

T. Lesage, Waterworks Engineer, City Hall, is receiving tenders on an addition to the pump house, which will be a reinforced concrete construction, with brick facing, felt and gravel roofing.

Sherbrooke, Que.

Anglins, Limited, Montreal, have been awarded the general contract for the erection of a machine shop for the Canadian Ingersoll Rand Company. Estimated cost is \$50,000.

Valleyfield, Que.

The Castings Co. of Canada, Limited, are building a forge and foundry building.

SASKATCHEWAN.**Mair, Sask.**

The Mair Rural Telephone Company have been authorized to borrow \$2,400 for the construction of their system.

BROWN BROS., LIMITED



Manufacturers of
ACCOUNT BOOKS
Loose Leaf Ledgers, Binders, etc.
Leather Goods, Diaries, Paper,
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- *Canadian Hart Wheels, Ltd., Hamilton, Ont.
- *Dominion Abrasive Wheel Co., New Toronto, Ont.

ACCOUNT BOOKS

- *The Brown Bros., Ltd., Toronto.

ACCOUNTING FORMS

- Business Systems, Ltd., Toronto.

ACETYLENE GAS BURNERS

- Economic Acetylene Burner Co., Toronto.

ACIDS

- *The Grasselli Chemical Co., Ltd., Toronto.

- *The Nichols Chemical Co., Ltd., Montreal.

ADJUSTARODS

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ADVERTISING NOVELTIES

- Lawson & Jones, Ltd., London, Ont.

AERATED BEVERAGES

- Charles Gurr & Co., Ltd., Montreal, Que.

- J. J. McLaughlin, Ltd., Toronto.

AIR WASHERS

- *The Canadian Sirocco Co., Windsor, Ont.

ALCOHOL

- The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

- *Hiram Walker & Sons, Ltd., Walkerville, Ont.

ALUM

- E. L. Drewry, Winnipeg, Man.

ALUMINUM

- *Northern Aluminum Co., Ltd., 1805 Traders Bank, Toronto.

ALUMINUM CASTINGS

- *Tallman Brass & Metal Co., Hamilton, Ont.

AMMONIA

- Canadian Ammonia Co., Ltd., Toronto.

ANGLE BARS

- *The Steel Company of Canada, Limited, Hamilton.

ARC AND INCANDESCENT HEADLIGHTS (Electric)

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ARCHITECTS

- *T. Pringle & Sons, Montreal.

ASBESTOS

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEATHING:

- *Canadian H. W. Johns-Manville Co., Toronto.

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEET AND PISTON PACKINGS:

- *Canadian H. W. Johns-Manville Co., Toronto.

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS STEAM PIPE AND BOILER COVERINGS:

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS TEXTILES:

- *Canadian H. W. Johns-Manville Co., Toronto.

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ATHLETIC UNDERWEAR

- Williams, Green & Rome Co., Ltd., Berlin, Ont.

AUTOMOBILES

- *Ford Motor Co. of Canada, Ltd., Walkerville, Ont.

- *Russell Motor Car Co., Ltd., Toronto.

AUTOMOBILE ACCESSORIES,

- *Northern Electric Co., Limited, Montreal.

- *Tallman Brass & Metal Co., Hamilton.

AUTOMOBILE PARTS

- Dominion Stamping Co., Walkerville, Ont.

AWNING CORD, cotton

- Hamilton Cotton Co., Hamilton, Ont.

AWNINGS

- *Smart-Woods, Ltd., Montreal.

AXLES

- Canada Forge Co., Ltd., Welland, Ont.

- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

AXLES, carriage and automobile

- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

BABBITT METAL

- Alonzo W. Spooner, Limited, Port Hope, Ont.

- *The Canada Metal Co., Toronto.

- *Tallman Brass & Metal Co., Hamilton.

BACON

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BAGS

- *Scythes & Co., Ltd., Toronto.

- *Smart-Woods, Ltd., Montreal.

BAGS, Cotton

- The Canadian Bag Co., Ltd., Montreal, Que.

BAGS, jute

- The Canadian Bag Co., Ltd., Montreal, Que.

- *Scythes & Co., Ltd., Toronto.

BAGS, travelling

- J. Eveleigh & Co., Ltd., Montreal, Que.

- Lamontagne, Ltd., Montreal, Que.

- The M. Langmuir Mfg. Co., of Toronto, Ltd., Toronto.

BAKING JAPAN

- *Berry Bros., Ltd., Winnipeg, Man.

BAND RESAWS:

- *Berlin Machine Works, Ltd., Hamilton.

BANK AND OFFICE RAILINGS

- *The Geo. B. Meadows, Toronto Wire, Iron & Brass Works Co., Ltd., Toronto.

- *Canada Wire and Iron Works, Hamilton.

BANK FITTINGS

- The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

BANK RAILINGS and CAGES:

- *Canada Wire and Iron Goods Co., Hamilton.

- *Dennis Wire & Iron Works Co., London.

BANK SIGNS AND FITTINGS

- *Tallman Brass & Metal Co., Hamilton.

BARS, iron

- London Rolling Mill Co., Ltd., London, Ont.

BARS, steel

- London Rolling Mill Co., Ltd., London, Ont.

BASEBALL GOODS

- A. J. Reach Co., Brantford, Ont.

BATHS, enamelled

- Amherst Foundry Co., Ltd., Amherst, N.S.

BATTERIES, dry

- The Canadian National Carbon Co., Ltd., Toronto.

- Canadian Carbon Company, Ltd., Toronto.

BEARINGS:

- *The Chapman Double Ball Bearing Co., Ltd., Toronto.

- The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS, bronze

- *Tallman Brass & Metal Co., Hamilton, Ont.

BEARINGS, pillow block and upright

- *Dodge Mfg. Co., Ltd., Toronto.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEDS, camp folding

- *Otterville Mfg. Co., Ltd., Otterville, Ont.

- *Smart-Woods, Ltd., Montreal.

BEEF

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BEER

- E. L. Drewry, Winnipeg, Man.

BELTING, chains.

- *Dodge Mfg. Co., Ltd., Toronto.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- *Jeffrey Mfg. Co., Montreal, Que.

BELTING, Elevator

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

BELTING, leather

- The Beardmore Belting Co., Ltd., Toronto.

- *J. L. Goodhue & Co., Danville, P.Q.

- *Sadler & Howarth, Montreal.

- *The D. K. McLaren Belting Co., Ltd., Montreal.

- *The J. C. McLaren Belting Co., Ltd., Montreal.

BELTING, rubber

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

- *Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

- *Gutta Percha & Rubber, Limited.

BENT GOODS

- The Crown Lumber Co., Woodstock, Ont.

BICYCLES AND ACCESSORIES

- *Canada Cycle and Motor Co., Ltd., Toronto.

BILLIARD BALLS

- Samuel May & Co., Toronto.

BINDERS, loose leaf

- Business Systems, Ltd., Toronto.

BISCUITS

- The Montreal Biscuit Co., Montreal, Que.

BLACK SHEETS:

- *A. C. Leslie & Co., Montreal.

BLANK BOOKS:

- Business Systems, Ltd., Toronto.

- *Morton, Philips & Co., Montreal.

BLANKETS

- Slingsby Mfg. Co., Ltd., Brantford, Ont.

- J. Walsham & Son, Limited, Bolton, Ontario.

BLANKETS, horse

- Slingsby Mfg. Co., Ltd., Brantford, Ont.

- *Smart-Woods, Ltd., Montreal.

- J. Walsham & Son, Limited, Bolton, Ont.

BLASTING ACCESSORIES

- Canadian Explosives, Ltd., Montreal, Que.

BLEACHING POWDER

- Canadian Salt Co., Ltd., Windsor, Ont.

BLOWERS:

- *The Canadian Sirocco Co., Windsor, Ont.

- *Sheldons, Ltd., Galt.

BOATS OF ALL KINDS

- Peterboro Canoe Co., Ltd., Peterboro, Ont.

BOILER COMPOUND and OILS

- *Canadian H. W. Johns-Manville Co., Toronto.

- Electric Boiler Compound Co., Ltd., Guelph, Ont.

BOILERS.

- *M. Beatty & Sons, Ltd., Welland, Ont.

- *Goldie & McCulloch Co., Ltd., Galt, Ont.

- John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

- *Polson Iron Works, Ltd., Toronto

- J. & R. Weir, Montreal, Que.

- Taylor-Forbes Co., Ltd., Guelph, Ont.

- *Jenckes Machine Co., Sherbrooke

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS, heating:

- *The Goldie & McCulloch Co., Ltd., Galt.

BOILERS, hot water or steam

- Warden King, Ltd., Montreal, Que.

BOILERS, steam.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- Steel and Radiation Ltd., Toronto.

- Warden King, Ltd., Montreal, Que.

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS, steam and brass work:

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS AND TANKS

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILER FEED PUMPS.

- *The Bawden Machine Co., Limited, Toronto.

BOILER STANDS

- Anthos Foundry Ltd., Toronto.

BOLSTERS

- *Canadian Car & Foundry Co., Ltd., Montreal, Que.

BOLTS:

- *The National Acme Mfg Co., Montreal.

BOLTS AND NUTS

- *The Canadian Tube & Iron Co., Ltd., Montreal, Que.

- *The Steel Company of Canada, Limited, Hamilton.

- *Starr Mfg. Co., Ltd., Dartmouth, N.S.

BOOKBINDERS

- R. G. McLean, Toronto.

- *The Brown Bros., Ltd., Toronto

BOOKCASES, sectional (Gunn)

- The George McLagan Furniture Co., Ltd., Stratford, Ont.

BOOKLETS

- Stone Limited, Toronto.

- R. G. McLean, Toronto.

BOOKS, blank

- *The Brown Bros., Ltd., Toronto

BOOTS AND SHOES,

- Ames-Holden-McCreedy, Ltd., Montreal, Que.

- J. Leckie Co., Ltd.

- The John Ritchie Co., Ltd., Quebec, Que.

BOWLING ALLEYS

- Samuel May & Co., Toronto.

BOXES, cellular board:

- *The Thompson & Norris Co. of Canada, Ltd., Niagara Falls.</

BRASS PLATES

Geo. Booth & Son, Toronto.
*Tallman Brass & Metal Co., Hamilton.

BRASS RODS, SHEETS AND PLATES

*Brown's Copper and Brass Rolling Mills, Ltd., New Toronto.

BRASS RODS, Sheets and Tubing:

*Tallman Brass & Metal Co., Hamilton.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

BRASS SIGNS AND MEMORIALS

*Tallman Brass & Metal Co., Hamilton.

BRASS TUBING, seamless

Canadian Seamless Wire Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.

BRASS WIRE

Canadian Seamless Wire Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.

BRASS WORK, church.

Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS WORK, special

Bawden Machine Co., Ltd., Toronto.

*Tallman Brass & Metal Co., Hamilton.

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

*The Watrous Engine Works Co., Ltd., Brantford.

BRICK

National Brick Co. of Laprairie, Laprairie, P.Q.
Port Credit Brick Co., Port Credit, Ont.

BRICK, enamel

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, pressed

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, rubbing

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

BRICK, sewer

National Brick Co. of Laprairie, Laprairie, P.Q.

BRIDGES, Railway and Highway

Dominion Bridge Co., Montreal.
*Hamilton Bridge Works Co., Ltd., Hamilton.

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*The Structural Steel Co., Ltd., Montreal.

BRINE PUMPS.

*The Bawden Machine Co., Limited, Toronto.

BROOMS

Simms, T. S., & Co., Ltd., St. John, N.B.
Stevens-Hepner Co., Ltd., Port Elgin, Ont.
*Boeckh Bros Co., Toronto.

BRUSHES:

*Boeckh Bros. Co., Toronto.
Simms, T. S., & Co., Ltd., St. John, N.B.
Stevens-Hepner Co., Ltd., Port Elgin, Ont.

BRUSHES, carbon

Canadian National Carbon Co., Ltd., Toronto.

BUCKET TANKS

*The General Fire Equipment Co., Ltd., Toronto, Ont.

BUCKLES, shoe and coat

Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

BUILDING

Bathurst Lumber Co., Ltd., Bathurst, N.B.

BUILDING BLOCKS, vitrified, salt glazed

Standard Clay Products, Ltd., St. Johns, Que.

BUILDING FELT and PAPER:

*Canadian H. W. Johns-Manville Co., Toronto.
*Eureka Mineral Wool & Asbestos Co., Toronto.
*Paterson Manufacturing Company, Toronto and Montreal.

BUILDING PAPERS

*Bird & Son, Hamilton, Ont.

BUILDERS, ship

*Polson Iron Works, Ltd., Toronto.
J. & R. Weir, Montreal, Que.

BURLAPS

The Canadian Bag Co., Ltd., Montreal, Que.

*Scythes & Co., Ltd., Toronto.

*Smart-Woods, Ltd., Montreal.

BURLAPS, decorative

Dominion Oil Cloth Co., Ltd., Montreal, Que.

CABINETS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CABLE, Copper and galvanized:

*The Steel Co. of Canada, Ltd., Hamilton.

CABLES, transmission and tele-

phones:

*Eugene F. Phillips Electrical Works, Ltd., Montreal.

CABLES, Transmission and Cable:

*Northern Electric Co., Limited, Montreal.

CABLES, wire

The Dominion Wire Rope Co., Ltd., Montreal.

*The B. Greening Wire Co., Ltd., Hamilton.

CALENDARS, ADVERTISING NOV-

ELTIES, etc.

Rolph & Clark, Ltd., Toronto.

Lawson & Jones, Ltd., London, Ont.

Stone Limited, Toronto.

CAMERAS

Canadian Kodak Co., Ltd., Toronto.

CAMPERS' OUTFITTERS

Slingsby Mfg. Co., Ltd., Brantford, Ont.

CANOEES

Peterboro Canoe Co., Ltd., Peterboro, Ont.

CANS, baking powder, etc.

American Can. Co., Montreal and Hamilton.

A. R. Whittall, Montreal.

CANS, fruit

American Can Co., Montreal and Hamilton.

A. R. Whittall, Montreal.

CANS, tin

A. R. Whittall, Montreal, Que.

American Can Co., Montreal and Hamilton.

CANS, iron, lead and putty

A. R. Whittall, Montreal.

CANVAS

*Scythes & Co., Ltd., Toronto.

*Smart-Woods, Ltd., Montreal.

CAPS, cloth

John W. Peck & Co., Ltd., Montreal, Que.

CARBIDE

*Canada Carbide Co., Ltd., Montreal.

CARBON BRUSHES

Canadian Carbon Co., Ltd., Toronto.

CARBON PRODUCTS

Canadian Carbon Co., Ltd., Toronto.

CARBONATING MACHINERY

The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

CARBONS, arc light

Canadian Carbon Co., Ltd., Toronto.

The Canadian National Carbon Co., Ltd.

CARBONS, flame

Canadian Carbon Co., Ltd., Toronto.

CARBONIC ACID GAS

Canadian Carbonate Company, Limited, Montreal.

CARBIDE OF CALCIUM

Canada Carbide Co., Ltd., Montreal, Que.

CARDBOARD

Bathurst Lumber Co., Ltd., Bathurst, N.B.

CARPETS AND RUGS

Toronto Carpet Mfg Co., Ltd. Toronto.

CARPETS AND RUGS, Axminster and ingrain

Toronto Carpet Mfg. Co., Ltd., Toronto.

CARPETS AND RUGS, Brussels and Wilton

Toronto Carpet Mfg. Co., Ltd., Toronto.

CARPET YARNS, worsted and wool

Toronto Carpet Mfg. Co., Ltd., Toronto.

CARRIAGES, baby, etc.

Canada Furniture Mfrs., Ltd., Woodstock, Ont.

CARRIERS.

*Richard-Wilcox Canadian Co., Limited, London, Ont.

CARRIERS, box and barrel

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

CARRIERS, brick

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

*Jeffrey Mfg. Co., Montreal, Que.

*Richards-Wilcox Canadian Co., Ltd., London, Ont.

CARS

*Canadian Car & Foundry Co., Ltd., Montreal, Que.

CARS, industrial:

*Sheldons, Ltd., Galt.

CARTONS, lithographed

Harris Lithographing Co., Toronto.

CASTINGS:

*Tallman Brass & Metal Co., Hamilton.

CASTINGS, aluminum:

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

CASTINGS, brass:

*Tallman Brass & Metal Co., Hamilton.

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

CASTINGS, brass and bronze:

*Tallman Brass & Metal Co., Hamilton.

CASTINGS, grey iron.

*Dodge Mfg. Co., Toronto.

*Canadian Car & Foundry Co., Ltd., Montreal, Que.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*The Record Foundry and Machine Co., Moncton, N.B.

Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

The Western Steel & Iron Co., Ltd., Winnipeg, Man.

CASTINGS, malleable iron:

*Galt Malleable Iron Co., Ltd., Galt, Ont.

*Pratt & Letchworth Co., Brantford, Ont.

CASTINGS, steel:

*Canadian Steel Foundries, Ltd., Montreal.

*Dominion Steel Foundry Co., Ltd., Hamilton, Ont.

Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

CATALOGUE MAKERS

Grip, Ltd., Toronto.

R. G. McLean, Toronto.

CAUSTIC SODA

Canadian Salt Co., Ltd., Windsor, Ont.

CEMENT GUNS

Steel and Radiation, Ltd., Toronto.

CHAIRS, assembly hall

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, folding

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, rattan and upholstered

Imperial Rattan Co., Ltd., Stratford, Ont.

CHEMICALS

*The Grasselli Chemical Co., Ltd., Toronto.

*The Nichols Chemical Co., Ltd., Montreal.

CHEMICAL LABORATORY APPARATUS

The Geo. M. Hendry Co., Ltd., Toronto, Ont.

CHICLETS AND CHEWING GUM

Canadian Chewing Gum Co., Ltd., Toronto.

CIGARS

Ed. Youngheart & Co., Ltd., Montreal, Que.

CIGARETTES AND TOBACCO

Philip Morris & Co., Ltd., Montreal, Que.

CIRCULAR CUTTERS, solid steel

The Peter Hay Knife Co., Ltd., Galt, Ont.

CLAM SHELL BUCKETS

*M. Beatty & Sons, Ltd., Welland, Ont.

CLOCKS AND CLOCK MOVEMENTS

The Arthur Pequegnat Clock Co., Berlin, Ont.

CLOCKS, TIME

*International Time Recording Co. of Canada, Ltd., Toronto.

CLOCKS, WATCHMEN'S

*The General Fire Equipment Co., Ltd., Toronto, Ont.

CLOSET SEATS

*Canadian H. W. Johns-Manville Co., Toronto.

*Goderich Organ Co., Goderich, Ont.

CLOTHING

John W. Peck & Co., Ltd., Montreal, Que.

MacKenzie & Co., Ottawa, Canada.

*Smart-Woods, Ltd., Montreal, Que.

CLOTHING, leather and sheepskin lined coats

A. R. Clarke & Co., Ltd., Toronto.

CLOTHING, Mackinaw

The Carss Mackinaw Clothing Co., Ltd., Orillia, Ont.

CLOTHES LINES, cotton

Hamilton Cotton Co., Hamilton, Ont.

CLUTCHES.

*Dodge Mfg. Co., Ltd., Toronto.

CLUTCHES, conveyors.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

COAL

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

Standard Fuel Co., Toronto.

COBALT OXIDE

The Coniagas Reduction Co., Ltd., St. Catharines, Ont.

COCOA AND CHOCOLATE PREPARATIONS

Walter Baker & Co., of Canada, Ltd., Montreal, Que.

COFFEE

S. H. Ewing & Sons, Montreal, Que.

COFFEE IMPORTERS, Roasters and Manufacturers

C. H. Cochrane & Co., Ottawa, Ont.

COLD DRAWN SCREW STEEL:

*Canadian Drawn Steel Co., Ltd., Hamilton.

*Union Drawn Steel Co., Ltd., Hamilton, Ont.

GOLD DRAWN SHAPES, flats, squares and hexagons:

*The Canadian Drawn Steel Co., Ltd., Hamilton.

*Union Drawn Steel Co., Ltd., Hamilton, Ont.

COLD STORAGE DOORS

John Hillock & Co., Ltd., Toronto.

COLLAR BUTTONS

The Arlington Co., of Canada, Ltd., Toronto.

COLLARS

The Standard Shirt Co., Ltd., Montreal, Que.

COLLARS, coated linen

Parsons & Parsons Canadian Co., Hamilton, Ont.

COLLARS AND CUFFS waterproof

Williams, Greene & Rome, Berlin, Ont.

COLORES

Brandram-Henderson Ltd., Montreal, Que.

A. Ramsay & Son Co., Montreal, Que.

Sherwin Williams Co. of Canada, Ltd., Montreal, Que.

COMBS, fine dressing and name

The Arlington Co. of Canada, Ltd., Toronto.

COMMERCIAL STATIONERS

Rolph & Clark, Ltd., Toronto.

COMMERCIAL STATIONERY:

*Brown Bros., Ltd., Toronto.

*Morton, Phillips & Co., Montreal.

CONCENTRATORS:

*Jenckes Machine Co., Sherbrooke.

CONCRETE COATINGS, paints, etc.

The Imperial Varnish & Color Co., Ltd., Toronto.

CONDUITS FOR INTERIOR WIRING

*Conduits Company, Ltd., Toronto.

CONDUITS FOR ELECTRICAL INSTALLATIONS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CONFECTIONERY

Ganong Bros., Ltd., St. Stephens, N.B.

Moirs, Limited, Halifax, N.S.

The Montreal Biscuit Co., Montreal, Que.

CONTRACTORS' PLANT

COOLING APPARATUS

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

COPPER:

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

COPPER SHEETS AND PLATES

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

*Tallman Brass & Metal Co., Hamilton.

COPPERSMITHS

*The Booth-Coulter Copper and Brass Co., Ltd., Toronto.

*COPPER TUBING, seamless Canadian Seamless Wire Co., Ltd., Toronto.

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

*COPPERWARE AND LANTERNS Sheet Metal Products Co. of Canada, Ltd., Toronto.

*COPPER WIRE Canadian Seamless Wire Co., Ltd., Toronto.

*CORKS S. H. Ewing & Sons, Montreal, Que.

*CORK CARPET Dominion Oil Cloth Co., Ltd., Montreal, Que.

*CORRUGATED BOXES: *Hinde & Dauch Paper Co., Toronto.

*Martin Corrugated Paper & Box Co., Ltd., Toronto.

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

*CORRUGATED PAPER: *The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

*CORSETS Dominion Corset Co., Quebec, Que.

*COTTONS *Dominion Textile Co., Ltd., Montreal.

*Montreal Cottons, Ltd., Valleyfield, P.Q.

*COTTONADES Hamilton Cotton Co., Hamilton, Ont.

*COUPLERS *Canadian Steel Foundries, Ltd., Welland, Ont.

*CRANES *Northern Crane Works, Walkerville.

*COUPLINGS: *Dodge Mfg. Co., Ltd., Toronto.

*CRANKSHAFTS Canada Forge Co., Ltd., Welland, Ont.

*CREAM CHEESE, Ingersoll The Ingersoll Packing Co., Ltd., Ingersoll, Ont.

*CREAM SEPARATORS AND MILK CLARIFIERS De Laval Dairy Supply Co., Ltd., Montreal, Que.

*CREAMERY AND CHEESE FACTORY MACHINERY AND SUPPLIES De Laval Dairy Supply Co., Peterboro, Ont.

*CREOSOTED MATERIALS: *The Dominion Creosoting Co., Ltd., Vancouver, B.C.

*Paterson Manufacturing Company, Toronto and Montreal.

*CRUSHED STONE The Hagersville Contracting Co., Ltd., Hagersville, Ont.

*CRUSHING ROLLS: *Jenckes Machine Co., Sherbrooke.

*CUES Samuel May & Co., Toronto.

*CUPOLAS, *Sheldons, Ltd., Galt.

*Northern Crane Works, Limited, Walkerville.

*CUPS, presentation Standard Silver Co., Toronto.

*CUPS, grease and oil *The Canadian Winkley Co., Ltd., Windsor, Ont.

*CURLED HAIR Delany & Pettit, Ltd., Toronto.

*CURTAINS, chenille Hamilton Cotton Co., Hamilton, Ont.

*CUTLERY Standard Silver Co., Toronto.

*Canadian Wm. A. Rogers, Ltd.

*DENIMS Hamilton Cotton Co., Hamilton, Ont.

DERAILS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

DESIGNERS

Ontario Engraving Co., Hamilton, Ont.

*DESIGNERS and PRINTERS OF BOOKLETS, ETC. Grip, Ltd., Toronto.

DINING ROOM SUITES

The George McLagan Furniture Co., Limited, Stratford, Ont.

DIES

*Butterfield & Co., Rock Island, P.Q.

*DISINFECTING APPARATUS Sparamotor Co., London, Ont.

DOOR HANGERS

*Richards Wilcox Canadian Co., Ltd., London, Ont.

*DRAPERY AND UPHOLSTERY GOODS Daly & Morin, Montreal, Que.

DREDGES

*M. Beatty & Sons, Ltd., Welland, Ont.

DRESSING, belt

Sadler & Haworth, Montreal, Que.

*DRESS AND CLOAK TRIMMINGS J. Henry Peters Co., 1 Mincing St., Toronto.

DRILLS:

*John Morrow Screw & Nut Co., Ltd., Ingersoll.

DRIFT BOLTS OR SPIKES

London Rolling Mill Co., Ltd., London, Ont.

*DROP FORGINGS: *Canadian Billings & Spencer, Ltd., Welland.

DRY CELLS, electric

Canadian Carbon Co., Ltd., Toronto.

DRY COLORS

P. D. Dods & Co., Ltd., Montreal, Que.

The Imperial Varnish & Color Co., Ltd., Toronto.

R. C. Jamieson & Co., Ltd., Montreal, Que.

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

DRY KILN EQUIPMENT

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

DUMB WAITERS

Turnbull Elevator Mfg. Co., Toronto.

DURABLE WIRE ROPE

The Dominion Wire Rope Co., Ltd., Montreal.

DYNAMITE

Canadian Explosives Ltd., Montreal, Que.

DYNAMOS.

Consolidated Electric Co., Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*The Canadian Crocker-Wheeler Co., Limited St. Catharines.

DYNAMOS, plating

*Jones & Moore Electric Co., Ltd., Toronto.

EIDERDOWN

Galt Knitting Co., Ltd., Galt.

ELECTRIC APPLIANCES.

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines.

*Canadian Westinghouse Co., Ltd., Hamilton.

ELECTRICAL COMPOUNDS

Standard Paint Co. of Canada, Ltd., Montreal, Que.

ELECTRICAL AND GAS FIXTURES

The Garth Co., Montreal, Que.

The James Morrison Brass Mfg. Co., Ltd., Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

ELECTRIC FURNACES

*Canadian Hoskins, Ltd., Walkerville.

ELECTRIC LAMPS.

*Packard Electric Co., Ltd., Toronto.

ELECTRIC PLATE WARE

Roden Bros., Ltd., Toronto.

ELECTRIC BATTERIES

Canadian Carbon Co., Ltd., Toronto.

ELECTROTYPING

Central Press Agency, Toronto.

ELECTRICAL SUPPLIES,

*Canadian Westinghouse Co., Ltd., Hamilton.

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Northern Electric Co., Limited, Montreal.

ELECTRO-SILVER PLATED WARE

Standard Silver Co., Toronto.

ELEVATORS:

*Jenckes Machine Co., Sherbrooke.

Turnbull Elevator Mfg. Co., Toronto.

*The Watrous Engine Works Co., Ltd., Brantford.

Northern Crane Works, Limited, Walkerville.

ELEVATORS FOR ALL PURPOSES

*The Watrous Engine Works Co., Ltd., Brantford.

*ELEVATOR GATES AND DOORS Turnbull Elevator Mfg. Co., Ltd., Toronto.

ELEVATOR GUARDS

*The Geo. B. Meadows, Toronto

Iron and Brass Goods Works Co., Ltd., Toronto.

*Canada Wire and Iron Works, Hamilton.

*ELEVATORS, hydraulic and electric John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

*EMERY DRESSERS and STANDS *Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY GRINDERS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEELS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEEL GUARDS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

*EMERY WHEEL Safety Flanges *Canadian Hart Wheels, Ltd., Hamilton, Ont.

ENAMELS

R. C. Jamieson & Co., Ltd., Montreal, Que.

ENAMEL MANUFACTURERS AND DECORATORS

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

ENAMEL AND TIN WARE

McClary Mfg. Co., London, Ont.

ENGINES

*E. Leonard & Sons, London.

*The Canadian Sirocco Co., Windsor, Ont.

*Goldie & McCulloch Co., Ltd., Galt, Ont.

J. & R. Weir, Montreal, Que.

*Polson Iron Works, Ltd., Toronto.

*Sheldons, Ltd., Galt.

*The Watrous Engine Works Co., Ltd., Brantford.

*ENGINES, gas and gasoline Gould-Shapley-Muir Co., Ltd., Brantford, Ont.

*Massey-Harris Co., Ltd., Toronto.

ENGINES, gasoline tractor

plowing and threshing Sawyer-Massey Co., Ltd., Hamilton, Ont.

ENGINES, hoisting

*M. Beatty & Sons, Welland.

*Watrous Engine Works Co., Ltd., Brantford.

ENGINES, steam plowing and threshing

Sawyer-Massey Co., Ltd., Hamilton, Ont.

ENGRAVERS

Grip, Ltd., Toronto.

Ontario Engraving Co., Hamilton, Ont.

Rolph & Clark, Ltd., Toronto.

Stone, Limited, Toronto.

ENGRAVERS, half-tone

Grip, Ltd., Toronto.

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS, wood

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS AND PRINTERS, steel plate

American Bank Note Co., Ottawa, Ont.

ENGRAVERS AND PRINTERS, banknote

American Bank Note Co., Ottawa, Ont.

ENGRAVING:

*J. L. Jones Engraving Co., Toronto.

*ENGRAVING, copper and steel plate Pritchard-Andrews Co., of Ottawa, Ltd., Ottawa.

*ENSILAGE AND STRAW CUTTERS J. Fleury's Sons, Aurora, Ont.

ENVELOPES

Barber-Ellis Co., Ltd., Toronto.

Canada Envelope Co., Montreal, Que.

ENVELOPES, Transos,

Business Systems, Ltd., Toronto.

EXCELSIOR

*Delany and Pettit, Ltd., Toronto, Ont.

EXCELSIOR PADS

*Delany and Pettit, Ltd., Toronto, Ont.

Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

EXPERTS IN PATENT CAUSES

Ridout & Maybee, Toronto.

*EXPLOSIVES, high Canadian Explosives Ltd., Montreal, Que.

FACE PLATE JAWS

Ker & Goodwin, Brantford, Ont.

*FACTORY SUPPLIES, cheese and creamery De Laval Dairy Supply Co., Ltd., Montreal, Que.

J. Henry Peters Co., 1 Mincing St., Toronto.

FANS:

*The Canadian Sirocco Co., Windsor, Ont.

*Sheldons, Ltd., Galt.

FASTENERS, belt

*Sadler & Haworth, Montreal, Que.

FENCES and GATES:

*Dennis Wire & Iron Works Co., London.

*Canada Wire and Iron Works, Hamilton.

FENCING AND GATES, woven wire

Barwell Hoxie Wire Fence Co., Hamilton, Ont.

*Canada Wire and Iron Goods Co., Hamilton.

*FENCING, wire The Great West Wire Fence Co., Ltd., Winnipeg, Man.

C. H. Johnson & Sons, Ltd., Montreal, Que.

FIBRE PAIS:

*The E. B. Eddy Co., Ltd., Hull.

FILES

Henry Disston & Sons, Ltd., Toronto.

*The Nicholson File Co., Port Hope, Ont.

FIRE ALARMS,

*Northern Electric Co., Limited, Montreal.

FIRE DOOR HARDWARE

*Richards Wilcox Canadian Co., Ltd., London, Ont.

FIRE ENGINES:

*Watrous Engine Works Co., Ltd., Brantford.

FIRE ESCAPES:

*Canada Wire and Iron Goods Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

FIRE EXTINGUISHERS

*The Booth-Coulter Copper and Brass Co., Ltd., Montreal, Que.

*Canadian H. W. Johns-Manville Co., Toronto.

*The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE FIGHTING APPARATUS

*Watrous Engine Works Co., Ltd., Brantford.

FIRE HOSE

*Canadian Consolidated Rubber Co., of Canada, Ltd., Montreal, Que.

Dunlop Tire and Rubber Goods Co., Limited, Toronto.

*Gutta Percha & Rubber, Ltd.

*FIRE PREVENTION MATERIAL. *Chicago Bridge & Iron Works, Bridgeburg, Ont.

*Eureka Mineral Wool & Asbestos Co., Toronto.

*The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE-PROOF WINDOWS AND DOORS

*Pedlar People Ltd., Oshawa, Ont.

FIRE SPRINKLER SYSTEMS.

*Chicago Bridge & Iron Works, Bridgeburg, Ont.
 *The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE AND WATER DEPARTMENT SUPPLIES.

*Chicago Bridge & Iron Works, Bridgeburg, Ont.
 The Garth Co., Montreal, Que.

FISH, Atlantic Sea-Foods

Maritime Fish Corporation Ltd., Montreal.

FITTINGS FOR SOIL PIPE

Anthes Foundry, Ltd., Toronto.

FITTINGS, steam

Warden King, Ltd., Montreal, Que.

FLAGS

*Scythes & Co., Ltd., Toronto.

*Smart-Woods, Ltd., Montreal.

FLASHLIGHTS

Canadian Carbon Co., Toronto.

FLOORING, hardwood

Seaman Kent Co., Ltd., Meaford, Ont.

FLUE LINERS

Standard Clay Products, Ltd., St. Johns, Que.

FORGES:

*Sheldons, Ltd., Galt.

FORGINGS

Canada Forge Co., Ltd., Welland, Ont.

*The Steel Co. of Canada, Ltd., Hamilton.

FORGINGS, DROP

*Dominion Stamping Co., Walkerville, Ont.

FOUNDRY EQUIPMENT

Northern Crane Works, Limited, Walkerville.

FOUNTAIN FRUITS and Juices

J. J. McLaughlin, Ltd., Toronto.

FRICITION CLUTCH PULLEYS:

*Dodge Mfg. Co., Ltd., Toronto.

FROGS and CROSSINGS, manganese

Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

FUEL

Standard Fuel Co., Toronto.

FUR GARMENTS, men's and women's

Holt, Renfrew, Ltd., Quebec.

FUR GOODS

John W. Peck & Co., Ltd., Montreal, Que.

FUR TRIMMINGS, ornaments and buttons

J. Henry Peters Co., 1 Mincing St., Toronto.

FURNACES

Gurney Foundry Co., Ltd., Toronto.

McClary Mfg. Co., London, Ont.

The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

FURNACES, hot air

Bedford Stove Co., Bedford, Que.

FURNITURE, hall

The George McLagan Furniture Co., Ltd., Stratford, Ont.

FURNITURE, house and office

Canada Furniture Mfrs., Ltd., Woodstock, Ont.

FURNITURE, office

The Canadian Office and School Furniture Co., Ltd., Preston, Ont.

FURNITURE, reed and rattan

Imperial Rattan Co., Ltd., Stratford, Ont.

FUSE BOXES (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

GALVANIZED IRON:

*A. C. Leslie & Co., Montreal.

GALVANIZERS

Acme Stamping & Tool Works, Ltd., Hamilton, Ont.

*Ontario Wind Engine and Pump Co., Ltd., Toronto.

GASOLINE ENGINES

*Ontario Wind & Pump Co., Ltd., Toronto.

De Laval Dairy Supply Co., Ltd., Peterboro, Ont.

GASOLINE FIRE ENGINES

*The Watrous Engine Works Co., Ltd., Brantford.

GASOLINE MOTORS, "Imperial" Marine

Bruce Stewart & Co., Ltd., Charlottetown, P.E.I.

GASOLINE STORAGE SYSTEMS, special underground

S. F. Bowser & Co., Toronto.

GASOLINE

*The Imperial Oil Co., Ltd., Toronto.

GEARS, CUT

Hamilton Gear & Machine, Toronto.

GENERATORS:

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines.

*Canadian Westinghouse Co., Ltd., Hamilton.

GINS

The Melchers Gin & Spirits Distillery Co., Ltd., Montreal, Que.

GLASSWARE

Dominion Glass Co., Ltd., Montreal, Que.

GLASSWARE, cut

Roden Bros., Ltd., Toronto.

GLASS FOR BUILDINGS

Toronto Plate Glass Importing Co., Ltd., Toronto.

GLASS BENDERS

Toronto Plate Glass Importing Co., Ltd., Toronto.

GLASS, mirror

Toronto Plate Glass Importing Co., Ltd., Toronto.

GLOVES AND MITTS

A. R. Clarke & Co., Ltd., Toronto.

Craig, Cowan Co., Limited, Toronto.

GLUE

Delany and Pettit, Ltd., Toronto, Ont.

GOLD FILLED WIRE AND PLATE

Canadian Seamless Wire Co., Toronto.

Canadian Seamless Wire Co., Toronto.

Canadian Seamless Wire Co., Toronto.

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HARDWOOD INTERIOR FINISH

Wilson Bros., Ltd., Collingwood, Ont.

HARDWOOD VENEER DOORS TO DETAIL

Wilson Bros., Ltd., Collingwood, Ont.

HARNESSES

Lamontagne Ltd., Montreal, Que.

HARPPON GUY ANCHORS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

HATS, men's straw

The Crown's Hat Co., Ltd., Galt, Ont.

HATS, ladies' and children's straw

The Crown Hat Co., Ltd., Galt, Ont.

HATS, ladies' and children's felt and beaver

The Crown Hat Co., Ltd., Galt, Ont.

HATS, ladies' felt and straw

Toronto Hat Mfg. Co., Toronto.

HAULAGE, Wire Rope

The Dominion Wire Rope Co., Ltd., Montreal.

HEATERS

*The Canadian Sirocco Co., Windsor, Ont.

*Watrous Engine Works Co., Ltd., Brantford.

HEATERS, feed water:

*The Goldie & McCulloch Co., Ltd., Galt.

HEATING APPLIANCES:

*Sheldons, Ltd., Galt.

HEATING SYSTEMS

Gurney Foundry Co., Ltd., Toronto.

HESSIANS

The Canadian Bag Co., Ltd., Montreal, Que.

*Scythes & Co., Ltd., Toronto.

*Smart-Woods, Ltd., Montreal.

HINGES:

*The Steel Co. of Canada, Ltd., Hamilton.

HOISTS

*M. Beatty & Sons, Ltd., Welland, Ont.

Northern Crane Works, Limited, Walkerville.

HOISTS, electric and pneumatic.

*M. Beatty & Sons, Ltd., Welland, Ont.

Northern Crane Works, Limited, Walkerville.

HOISTING MACHINERY.

*M. Beatty & Sons, Ltd., Welland, Ont.

Northern Crane Works, Limited, Walkerville.

HOSE, fire

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

HOSE, half, Imperial

Kingston Hosiery Co., Ltd., Kingston, Ont.

HOSE, rubber.

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber, Limited.

HUMIDIFIERS

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

HYDRAULIC PRESSES

Bawden Machine Co., Ltd., Toronto.

ICE CREEPERS

Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

ICE-MAKING MACHINERY

The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

INCUBATORS & BROODERS

Lee Mfg. Co., Ltd., Pembroke, Ont.

INDEX CARDS

Business Systems, Ltd., Toronto.

INJECTORS, automatic and autoperative

Penberthy Injector Co., Ltd., Windsor, Ont.

INSULATION, patent seamless cork

*Canadian H. W. Johns-Manville Co., Toronto.

The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

INTERLOCKING RUBBER TILING

*Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd., Toronto.

INVERTS

Standard Clay Products, Ltd., St. Johns, Que.

IRON:

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

IRON AND STEEL BARS

*The Steel Company of Canada, Limited, Hamilton.

IRON, refined bar

Starr Mfg. Co., Ltd., Dartmouth, N.S.

IRON PUMPS.

*The Bawden Machine Co., Limited, Toronto.

IRON STAIRWAYS:

*Canada Wire & Iron Goods Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

IRONWORK, achitectural

*Canada Wire & Iron Goods Co., Hamilton.

The Western Steel & Iron Co., Ltd., Winnipeg, Man.

IRONWORK, ornamental

*Canada Wire & Iron Goods Co., Hamilton.

The Western Steel & Iron Co., Ltd., Winnipeg, Man.

IRON, LEAD AND PUTTY

A. R. Whittall, Montreal.

JAM, canned goods, etc.

E. D. Smith & Son, Limited.

JAPANS, enamels, etc.

A. Muirhead Co., Ltd., Toronto.

JOINTERS:

*Berlin Machine Works, Ltd., Hamilton.

JELLY POWDER

S. H. Ewing & Sons, Montreal, Que.

JEWELRY, enamelled souvenir

Caron Bros., Montreal, Que.

JEWELRY, gold filled

Caron Bros., Montreal, Que.

JOIST HANGERS

*Richards-Wilcox Canadian Co., Ltd., London, Ont.

KELSEY WARM AIR GENERATOR

The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

KILNS:

*Sheldons, Ltd., Galt.

KINDLING

Standard Fuel Co., Toronto.

KNIFE GRINDERS:

*W. H. Banfield & Sons, Toronto.

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<p>LARD F. W. Fearman Co., Ltd., Hamilton, Ont.</p> <p>LATH The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.</p> <p>LATHE CHUCKS Ker & Goodwin, Brantford, Ont.</p> <p>LATHE-DOGS: Canadian Billings & Spencer Ltd., Welland.</p> <p>LAUNCHES Peterboro Canoe Co., Ltd., Peterboro, Ont.</p> <p>LAWN MOWERS Taylor-Forbes Co., Ltd., Guelph, Ont.</p> <p>LAWN SWINGS Stratford Mfg. Co., Ltd., Stratford, Ont.</p> <p>LAVATORIES, enameled Amherst Foundry Co., Ltd., Amherst, N.S.</p> <p>LAUNDRY SINKS Amherst Foundry Co., Ltd., Amherst, N.S.</p> <p>LEAD *The Consolidated Mining and Smelting Co. of Canada, Ltd., Trail, B.C.</p> <p>LEAD GRINDERS Benjamin Moore & Co., Ltd., Toronto.</p> <p>LEAD SHEET Toronto Plate Glass Importing Co., Ltd., Toronto.</p> <p>LEAD PIPE *The Steel Co. of Canada, Ltd., Hamilton. Toronto Plate Glass Importing Co., Ltd., Toronto. *The Canada Metal Co., Toronto.</p> <p>LEATHER The Robson Leather Co., Ltd., Oshawa.</p> <p>LEATHER, bookbinders' Clarke & Clarke, Ltd., Toronto.</p> <p>LEATHER, fancy Clarke & Clarke, Ltd., Toronto.</p> <p>LEATHER GOODS Lamontagne, Ltd., Montreal, Que.</p> <p>LEATHER, hemlock sole The Breithaupt Leather Co., Ltd., Berlin, Ont.</p> <p>LEATHER, patent colt and side leather A. R. Clarke & Co., Ltd., Toronto.</p> <p>LEATHER, sheep skin, etc. Clarke & Clarke, Ltd., Toronto.</p> <p>LEATHER, upholstering. Clarke & Clarke, Limited, Toronto.</p> <p>LEATHER, upper A. Davis & Son, Ltd., Kingston, Ont.</p> <p>LINK BELTING. *The Dodge Mfg. Co., Ltd., Toronto. *The Goldie & McCulloch Co., Ltd., Galt, Ont.</p> <p>LINOLEUM Dominion Oil Cloth Co., Ltd., Montreal, Que.</p> <p>LITHOGRAPHED BUSINESS STATIONERY Business Systems, Ltd., Toronto.</p> <p>LITHOGRAPHED TIN WARE: *MacDonald Mfg. Co., Ltd., Toronto.</p> <p>LITHOGRAPHERS American Bank Note Company, Ottawa, Ont. Harris Lithographing Co., Toronto. *Montreal Lithographing Co., Montreal. Stone, Limited, Toronto. Rolph & Clark Ltd., Toronto.</p> <p>LOCKERS: *Canada Wire & Iron Works Co., Hamilton. *Dennis Wire & Iron Works Co., London. *Geo. B. Meadows, Wire, Iron and Brass Wks. Co., Toronto.</p>	<p>LOCOMOTIVE BLOCKS Standard Clay Products, Ltd., St. Johns, Que.</p> <p>LOCOMOTIVES, industrial *Montreal Locomotive Works, Ltd., Montreal.</p> <p>LOCOMOTIVE & MARINE BRASS WORKS The James Morrison Brass Mfg. Co., Ltd., Toronto.</p> <p>LOOSE LEAF, BINDERS AND FORMS Business Systems, Ltd., Toronto.</p> <p>LOOSE LEAF SYSTEMS Copeland-Chatterton Co., Ltd., Toronto.</p> <p>LOOSE LEAF SUPPLIES The Esdale Press, Ltd., Edmonton.</p> <p>LUBRICATORS, steam sight feed Penberthy Injector Co., Ltd., Windsor, Ont.</p> <p>LUGS, for silos and water tanks *Otterville Mfg. Co., Ltd., Otterville, Ont.</p> <p>LUMBER The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont. G. & J. Esplen, Montreal, Que.</p> <p>LUMBER, asbestos: *Canadian H. W. Johns-Manville Co., Toronto. *Eureka Mineral Wool & Asbestos Co., Toronto.</p> <p>LUMBERING BLANKETS. Slingsby Mfg. Co., Ltd., Brantford, Ont.</p> <p>LUMBER, red pine and spruce Gillies Bros., Ltd., Braeside, Ont.</p> <p>LUMBER, spruce, fir, larch and cedar Ferne Lumber Co., Ltd., Fernie, B.C.</p> <p>LUMBER, white pine Gillies Bros., Ltd., Braeside, Ont.</p> <p>MACHINE TOOLS *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, brick: *The Canadian Sirocco Co., Ltd., Windsor, Ont. *Sheldons, Ltd., Galt.</p> <p>MACHINERY, conveying. Canadian Mathews Gravity Carrier Co., Ltd., Toronto. *The Canadian Sirocco Co., Ltd., Windsor, Ont. *The Goldie & McCulloch Co., Ltd., Galt, Ont. *The Jeffrey Mfg. Co., Montreal.</p> <p>MACHINERY, elevating. Canadian Mathews Gravity Carrier Co., Ltd., Toronto. *The Goldie & McCulloch Co., Ltd., Galt, Ont. *The Jeffrey Mfg. Co., Montreal.</p> <p>MACHINERY, flour mill: *The Goldie & McCulloch Co., Ltd., Galt.</p> <p>MACHINERY, grinding *Canadian Hart Wheels, Ltd., Hamilton, Ont.</p> <p>MACHINERY, hoisting, etc. *The Jeffrey Mfg. Co., Montreal. *Polson Iron Works, Ltd., Toronto. J. & R. Weir, Montreal, Que. *M. Beatty & Sons, Ltd., Welland, Ont. Northern Crane Works, Limited, Walkerville.</p> <p>MACHINERY, ice cream J. J. McLaughlin, Ltd., Toronto.</p> <p>MACHINERY, iron working *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, pulp mill *The Watrous Engine Works Co., Ltd., Brantford.</p>	<p>MACHINERY, pumping *The Canadian Sirocco Co., Ltd., Windsor, Ont. *The Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINERY, punching and shearing *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, railroad and car shop *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, roadmaking Sawyer-Massey Co., Ltd., Hamilton, Ont. *Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINERY, sawmill The E. Long Mfg. Co., Ltd., Orillia, Ont. P. Payette & Co., Penetanguishene, Ont. W. P. Plant, Hastings, Ont. *Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINERY, special Bawden Machine Co., Ltd., Toronto.</p> <p>MACHINERY, tannery W. P. Plant, Hastings, Ont.</p> <p>MACHINERY, transmission *Dodge Mfg. Co., Ltd., Toronto. *Goldie & McCulloch Co., Ltd., Galt, Ont.</p> <p>MACHINERY, wood working *Berlin Machine Works, Ltd., Hamilton. *The Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINE WRENCHES: *Canadian Billings & Spencer, Ltd., Welland.</p> <p>MACHINES, painting Spramotor Co., London, Ont.</p> <p>MAGNESITE Canadian Carbonate Co., Ltd., Montreal, Que.</p> <p>MAILING TUBES: *Dominion Paper Box Co., Ltd., Toronto.</p> <p>MALT: *Hiram Walker & Sons, Ltd., Walkerville.</p> <p>MAPS AND MAP MOUNTING The Geo. M. Hendry Co., Ltd., Toronto. Stone, Limited, Toronto.</p> <p>MARTINGALE RINGS AND SLIDE LOOPS The Arlington Co. of Canada, Ltd., Toronto.</p> <p>MATCHERS: *Berlin Machine Works, Ltd., Hamilton.</p> <p>MATCHES: *The E. B. Eddy Co., Ltd., Hull.</p> <p>MEATS, canned The Wm. Davies Co., Ltd., Toronto.</p> <p>MECHANICAL DRAUGHT *Canadian Sirocco Co., Windsor, Ont.</p> <p>MECHANICAL STOKERS. *The Jones Underfeed Stoker Co., Ltd., Toronto.</p> <p>MEDICINES, patented and pharmaceutical Dr. Ed. Morin & Cie., Ltd., Quebec.</p> <p>METAL, babbitt *Canada Metal Co., Toronto. *Talkman Brass & Metal Co., Hamilton. Alonso W. Spooner, Limited, Port Hope, Ont.</p> <p>METAL CEILING: *Metallic Roofing Co., Ltd., Toronto. *Metal Shingle & Siding Co., Ltd., Preston. *Pedlar People, Ltd., Oshawa, Ont.</p> <p>METAL PACKING *Garlock Packing Company, Hamilton.</p> <p>METAL ROOFING *Pedlar People Ltd., Oshawa, Ont.</p> <p>METAL, spinning and stamping The Booth-Coulter Copper and Brass Co., Ltd., Toronto.</p> <p>METAL SHINGLES: *Metal Shingle & Siding Co., Ltd., Preston. *The Metallic Roofing Co. of Canada, Ltd., Toronto, Ont. *Pedlar People, Ltd., Oshawa, Ont.</p>	<p>METAL SIDING: *Metallic Roofing Co., Ltd., Toronto. *Metal Shingle & Siding Co., Ltd., Preston. *Pedlar People, Ltd., Oshawa, Ont.</p> <p>MILK BOTTLE CAPS Business Systems, Ltd., Toronto.</p> <p>MILK DEALERS' MACHINERY AND SUPPLIES De Laval Dairy Supply Co., Ltd., Montreal, Que.</p> <p>MILLBOARD, asbestos: *Canadian H. W. Johns-Manville Co., Toronto. *Eureka Mineral Wool & Asbestos Co., Toronto.</p> <p>MILLING CUTTEES Pratt and Whitney Company of Canada, Dundas, Ont.</p> <p>MITTS AND GLOVES (Indian tan, red deerskins) Holt, Renfrew Ltd., Quebec, Que. A. R. Clarke & Co., Ltd., Toronto.</p> <p>MOCCASINS AND SLIPPERS (Indian tanned leathers) Holt, Renfrew, Ltd., Quebec, Que.</p> <p>MORTISERS: *Berlin Machine Works, Ltd., Hamilton.</p> <p>MOTOR CAR PARTS AND ACCESSORIES *Russell Motor Car Co., Ltd., Toronto.</p> <p>MOTORS: *Canadian Crocker-Wheeler Co., Ltd., St. Catharines. *Canadian Westinghouse Co., Ltd., Hamilton.</p> <p>MOTORS, D.C. *Canadian Crocker Wheeler Co., St. Catharines, Ont.</p> <p>MOTORS, electric (alternating current) *Canadian Westinghouse Co., Ltd., Hamilton. Consolidated Electric Co., Ltd., Toronto. *Jones & Moore Electric Co., Ltd., Toronto. *The Canadian Crocker-Wheeler Co., Limited St. Catharines.</p> <p>MOTORS, electric (direct current) *Canadian Westinghouse Co., Ltd., Hamilton. Consolidated Electric Co., Ltd., Toronto. *Jones & Moore Electric Co., Ltd., Toronto.</p> <p>MOTORS, electric (repairing) Consolidated Electric Co., Ltd., Toronto.</p> <p>MOTOR TRUCKS: *The Gramm Motor Truck Co., Ltd., Walkerville.</p> <p>MOULDERS: *Berlin Machine Works, Ltd., Hamilton.</p> <p>NAILS *The Steel Company of Canada, Limited, Hamilton.</p> <p>NAILS, copper Parmenter and Bulloch Co., Ltd., Gananoque, Ont.</p> <p>NAILS, wire Parmenter and Bulloch Co., Ltd., Gananoque, Ont. The Graham Nail Works, Toronto.</p> <p>NAPHTHA *The Imperial Oil Co., Ltd., Toronto.</p> <p>NICKEL OXIDE Coniagas Reduction Co., Ltd., St. Catharines, Ont.</p> <p>NUTS *John Morrow Screw & Nut Co., Ltd., Ingersoll. *The National Acme Mfg. Co., Montreal. *The Steel Company of Canada, Limited, Hamilton.</p> <p>OAKUM, plumbers', Canadian Navy Factory Waste and Metal Co., Montreal, Que. *Scythies & Co., Ltd., Toronto.</p> <p>OAT CRUSHERS AND FLAKERS J. Fleury's Sons, Aurora, Ont.</p>
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OFFICE STATIONERY:

*The Montreal Lithographing Co., Ltd., Montreal.

OILS

Brandram-Henderson, Ltd., Montreal, Que.
A. Ramsay & Son Co., Montreal, Que.
Sherwin-Williams Co. of Canada, Ltd., Montreal, Que.

OIL FILTRATION AND CIRCULATING SYSTEMS

S. F. Bowser & Co., Toronto.

OILERS AND OIL STOVES

Sheet Metal Products Co. of Canada, Ltd., Toronto.

OIL STORAGE SYSTEMS, self measuring

S. F. Bowser & Co., Toronto.

OIL COMPANIES

Commercial Oil Co., Ltd., Hamilton, Ont.

OILS (Petroleum products)

*British American Oil Co., Ltd., Toronto.

OILS, Petroleum

*The Imperial Oil Co., Ltd., Toronto.

OILS, road

*Paterson Manufacturing Company, Toronto and Montreal.

OILCLOTHS, floor and table

Dominion Oil Cloth Co., Ltd., Montreal, Que.

OFFICE DESKS

*Goderich Organ Co., Goderich, Ont.

ORGANS

*Goderich Organ Co., Goderich, Ont.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

Thomas Organ & Piano Co., Woodstock, Ont.

ORGANS, pipe

Casavant Freres, St. Hyacinthe, Que.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

ORGANS, parlour

Goderich Organ Co., Goderich.

ORNAMENTAL IRON WORK:

*Canada Wire & Iron Goods Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

*The Geo. B. Meadows, Toronto Iron and Brass Goods Works, Co., Ltd., Toronto.

OVENS, portable bake

Bedford Stove Co., Bedford, Que.

OVERALLS

Mackenzie & Co., Ottawa, Ont.

Peerless Overall Co., Rock Island, Que.

Walker Pant and Shirt Co., Walker, Ont.

The Standard Shirt Co., Ltd., Montreal, Que.

OVERCOATINGS

Rosamond Woollen Co., Aumont, Ont.

OVERHEAD RUNWAYS.

*Richard-Wilcox Canadian Co., Limited, London, Ont.

PACKING BOXES

Barchard & Co., Ltd., Toronto.

PACKING, engine:

*Garlock Packing Co., Hamilton.

PACKING, rubber

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber, Ltd., Jenkins Bros., Ltd., Montreal, Que.

PAIS AND TUBS, wooden

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

PAINTERS' SUPPLIES

A. Muirhead Co., Ltd., Toronto.

PAINTS

R. C. Jamieson & Co., Ltd., Montreal, Que.

PAINTS AND VARNISHES:

A. Muirhead Co., Ltd., Toronto.

Benjamin Moore & Co., Ltd., Toronto.

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

The Imperial Varnish & Color Co., Ltd., Toronto.

The Staneland Co., Ltd., Victoria, B.C.

A. Ramsay & Sons Co., Montreal, Que.

Sherwin-Williams Co. of Canada, Ltd., Montreal, Que.

*Ault & Wiborg Co. of Canada, Toronto.

*The Dougall Varnish Co., Ltd., Montreal.

Standard Paint Co. of Canada, Ltd., Montreal.

PAINTS, barn and bridge

Standard Paint and Varnish Co., Ltd., Windsor, Ont.

The Sherwin-Williams Co. of Canada, Ltd., Montreal.

PAINTS, Preservative

Standard Paint Co. of Canada, Ltd., Montreal, Que.

*Paterson Manufacturing Company, Toronto and Montreal.

PANELBOARDS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PAPER BOARDS

Bathurst Lumber Co., Ltd., Bathurst, N.B.

PAPER, book

Barber Paper & Coating Mills, Ltd., Georgetown, Ont.

PAPER BOXES

King Paper Box Co., Ltd., Montreal, Que.

*Rudd Paper Box Co., Ltd., Toronto.

PAPERS, bond

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, envelope

Provincial Paper Mills Ltd., Georgetown, Ont.

The Toronto Paper Mfg. Co., Cornwall, Ont.

PAPER, KRAFT, wrapping printing and waterproof

*Beveridge Paper Co., Ltd., Montreal, Que.

PAPER, news

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPER, wrapping

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPERS, building

Bathurst Lumber Co., Ltd., Bathurst, N.B.

*The Riordon Pulp and Paper Co., Montreal, Que.

Standard Paint Co. of Canada, Ltd., Montreal.

PAPER, coated, book and label

*Ritchie & Ramsay, Ltd., Toronto

Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, coated cover

*Ritchie & Ramsay, Ltd., Toronto.

Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, coated box board

*Ritchie & Ramsay, Ltd., Toronto.

Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, enamelled blotting

*Ritchie & Ramsay, Ltd., Toronto

Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, gummed tapes

Gummed Papers, Ltd., Brampton, Ont.

PAPER, label

Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, ledger

*Rolland Paper Co., Ltd., Montreal, Que.

The Toronto Paper Mfg. Co., Cornwall, Ont.

PAPER, super-book

The Toronto Paper Mfg. Co., Cornwall, Ont.

PAPER, wall

Stauntons, Ltd., Toronto.

PAPER, writing

The Toronto Paper Mfg. Co., Cornwall, Ont.

PAPER, writing, high-grade

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, writing, superfine

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER BOXES:

*Dominion Paper Box Co., Toronto.

PARK SEATS

Stratford Mfg. Co., Ltd., Stratford, Ont.

PARLOR SUNDRIES

The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

PATENTS

Fetherstonhaugh & Co., Toronto.

Ridout and Maybee, Toronto.

PATENT LITIGATION

Ridout and Maybee, Toronto.

PAY ROLL AUDITS

*International Time Recording Co. of Canada, Ltd., Toronto.

PEAS AND BEANS FOR SEED

W. P. Niles, Ltd., Wellington, Ont.

PERFORATED METALS:

*Canada Wire & Iron Goods Co., Hamilton.

PERFORATED MUSIC ROLLS

The Otto Higel Co., Limited, Toronto.

PERFUMES AND TOILET PREPARATIONS

Sovereign Perfumes Ltd., Toronto.

PETROLEUM PRODUCTS

*The Imperial Oil Co., Ltd., Toronto.

PHOTOMAILERS

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

PIANOS

Dominion Organ & Piano Co., Ltd., Bowmanville, Ont.

*Gourlay, Winter and Leeming, Toronto.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

PIANO ACTIONS

The Otto Higel Co., Ltd., Toronto.

PIANO KEYS

The Otto Higel Co., Ltd., Toronto.

PIANOS, player

*Gourlay, Winter & Leeming, Toronto.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

PIANO, player actions

The Otto Higel Co., Ltd., Toronto.

PIANO STOOLS and BENCHES

*Goderich Organ Co., Goderich, Ont.

PICKLES:

The Wm. Davies Co., Ltd., Toronto.

PICKLES AND CATSUPS:

T. A. Lytle Co., Ltd., Toronto.

PIG IRON

*The Steel Company of Canada, Limited, Hamilton.

PINE DOORS, SASH, MOULDINGS ETC.

Wilson Bros., Ltd., Collingwood, Ont.

PINS, society, emblems and Badges.

Caron Bros., Montreal, Quebec.

PIPE, cast iron, for water and gas.

National Iron Works, Ltd., Toronto.

PIPE COUPLINGS:

*The Steel Co. of Canada, Ltd., Hamilton.

PIPE COVERINGS:

*Eureka Mineral Wood & Asbestos Co., Toronto.

PIPE ORGANS

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

PIPES, culvert

Standard Clay Products, Ltd., St. Johns, Que.

PIPE AND NIPPLES, black and galvanized

*Canadian Tube & Iron Co., Ltd., Montreal, Que.

PIPE, sewer.

Hamilton and Toronto Sewer Pipe Co., Ltd., Hamilton, Ont.

Standard Clay Products, Ltd., St. Johns, Que.

PIPE, soil and fittings

Warden King Ltd., Montreal, Que.

PIPE AND TUBES, wrought merchant

*Page-Hersey Iron, Tube and Lead Co., Ltd., Toronto.

PIPE, Threading and Cutting off Machines

John H. Hall & Sons, Limited, Brantford, Ont.

PISTON RODS

*The Canadian Drawn Steel Co., Ltd., Hamilton.

*Union Drawn Steel Co., Ltd., Hamilton, Ont.

PLANERS:

*Berlin Machine Works, Ltd., Hamilton.

PLANING MILLS

G. & J. Esplen, Montreal, Que.

PLASTER OF PARIS

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, hard wall

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, land

*Albert Mfg. Co., Hillsborough, N.B.

PLAYING CARDS:

*The Montreal Lithographing Co., Ltd., Montreal.

PLOWS

J. Fleury's Sons, Aurora, Ont.

PLUMBERS SUPPLIES

*T. McAvity & Sons, Limited, St. John, N.B.

The Garth Co., Montreal, Que.

The James Morrison Brass Mfg. Co., Ltd., Toronto.

PLUMBING APPLIANCES:

Standard Sanitary Mfg. Co., Ltd., Toronto.

PLUMBING SUPPLIES

Toronto Plate Glass Importing Co., Ltd., Toronto.

POLES, curtain

Daly & Morin, Montreal, Que.

POLES, telegraph and telephone, cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

PORCELAIN INSULATORS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PORK PACKERS AND CHEESE EXPORTERS

The Ingersoll Packing Co., Ltd., Ingersoll, Ont.

POSTS, split cedar fence

Fernie Lumber Co., Ltd., Fernie, B.C.

POSTERS

Stone, Limited, Toronto.

POULTRY SUPPLIES AND MEDICINES

Lee Mfg. Co., Ltd., Pembroke, Ont.

POWDER, blasting

Canadian Explosives, Ltd., Montreal, Que.

POWER PRESSES:

*Canadian Boomer & Boschert Press Co., Ltd., Montreal.

PRESSES, baling

William R. Perrin & Co., Ltd., Toronto.

PRESSES, Filter

William R. Perrin & Co., Ltd., Toronto.

PRESSES, Hydraulic

*Canadian Boomer & Boschert Press Co., Ltd., Montreal.

PRESSES, Veneer

William R. Perrin & Co., Ltd., Toronto.

PRINTED BUSINESS STATIONERY

Business Systems, Ltd., Toronto.

PRINTERS

Rous & Mann, Ltd., Toronto.

R. G. McLean, Toronto.

PRINTERS, catalogue:

R. G. McLean, Toronto.

*Southam Press, Ltd., Toronto and Montreal.

PRINTING AND LITHOGRAPHING

Lawson & Jones, Ltd., London, Ont.

PRODUCE

The Wm. Davies Co., Ltd., Toronto

PROVISIONS

The Wm. Davies Co., Ltd., Toronto.

PULLEYS.

- PULP, Bleached Sulphite**
The Edward Partington Pulp and Paper Co., St. John, N.B.
- PULP, Sulphide**
Bathurst Lumber Co., Ltd., Bathurst, N.B.
- PUMPS.**
Spramotor Co., London, Ont.
*Canadian Fairbanks-Morse Co., Ltd., Montreal.
*Bawden Machine Co., Ltd., Toronto.
- PUMPS, ammonia**
*Bawden Machine Co., Ltd., Toronto.
- PUMPS, boiler feed.**
*Bawden Machine Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt.
- PUMPS, centrifugal**
*M. Beatty & Sons, Ltd., Welland, Ont.
*Waterous Engine Works Co., Ltd., Brantford.
- PUMPS, iron**
Goold-Shapley-Muir Co., Ltd., Brantford, Ont.
*Waterous Engine Works Co., Ltd., Brantford.
- PUMPS, tar**
*Bawden Machine Co., Ltd., Toronto.
- PUMPS, turbine, and equipment**
*Bawden Machine Co., Ltd., Toronto.
- PUMPS (Turbine and reciprocating)**
John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.
- PYJAMAS AND NIGHT ROBES**
Williams, Greene & Rome, Berlin, Ont.
- PYROMETERS**
*Canadian Hoskins, Ltd., Walkerville.
- RADIATORS**
Taylor-Forbes Co., Ltd., Guelph, Ont.
Warden King, Ltd., Montreal, Que.
- RAILINGS, brass and iron:**
*Dennis Wire & Iron Works Co., London.
- RAILWAY SIGNAL APPLIANCES**
General Railway Signal Co. of Canada, Ltd., Montreal, Que.
- RAILWAY SUPPLIES.**
*Canadian Steel Foundries, Ltd., Montreal.
*Chicago Bridge & Iron Works, Bridgeburg, Ont.
B. J. Coghlin Co., Ltd., Montreal, Que.
- RAILWAY TARIFF BINDERS**
The Esdale Press Ltd., Edmonton.
- READY-TO-WEAR GARMENTS, Ladies'**
H. C. Boulter Co., Ltd., Toronto.
- REAMERS**
Pratt and Whitney Co. of Canada, Dundas, Ont.
*Butterfield & Co., Rock Island, P.Q.
- "REDWOOD" lager**
E. L. Drewry, Winnipeg, Man.
- REED AND RATTAN GOODS**
Canada Furniture Mfgs., Ltd., Woodstock, Ont.
- REFRIGERATORS**
Sanderson-Harold Co., Ltd., Paris, Ont.
Lee Mfg. Co., Ltd., Pembroke, Ont.
- REFRIGERATING MACHINERY**
The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.
- REFRIGERATORS, store, homes and institutions.**
Ham & Nott Co., Ltd., Brantford, Ont.
John Hillock & Co., Ltd., Toronto.
- REINFORCEMENT BARS**
*The Steel Company of Canada, Limited, Hamilton.
- REINFORCEMENT for concrete:**
*Canada Wire & Iron Goods Co., Hamilton.
*Pedlar People Ltd., Oshawa, Ont.
- RINGS, gold**
Caron Bros., Montreal, Que.
- RIVETS**
Canadian Tube & Iron Co., Ltd., Montreal.
*The Steel Company of Canada, Limited, Hamilton.
- RIVETS, bifurcated and tubular**
Parmenter & Bulloch Co., Ltd., Gananoque, Ont.
- RIVETS AND BUEERS, iron, copper and brass**
Parmenter & Bulloch Co., Ltd., Gananoque, Ont.
- ROLLERS, shade**
Daly & Morin, Montreal, Que.
- ROOFING, metal**
*Metallic Roofing Co., Ltd., Toronto.
*Metal Shingle & Siding Co., Ltd., Preston.
- ROOFING, ready to lay**
*Canadian H. W. Johns-Manville Co., Toronto.
Standard Paint Co. of Canada, Ltd., Montreal, Que.
*Paterson Manufacturing Company, Toronto and Montreal.
- ROOFINGS**
*Bird & Son, Hamilton, Ont.
- ROOF TRUSSES**
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*Dominion Bridge Co., Ltd., Montreal.
- ROPE**
*Doon Twines Ltd., Doon, Ont.
- ROPE, cotton**
Hamilton Cotton Co., Hamilton, Ont.
- RUBBER FOOTWEAR**
Ames Holden, McCready, Ltd., Montreal, Que.
*Gutta Percha & Rubber, Ltd., The Miner Rubber Co., Ltd., Granby, Que.
*Smart-Woods, Ltd., Montreal.
- RUBBER GOODS.**
*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.
*Gutta Percha & Rubber, Ltd., Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
- RUBBER MOULDS**
Bawden Machine Co., Ltd., Toronto.
- RUBBER PACKING**
*Garlock Packing Company, Hamilton.
- RULES**
The Lufkin Rule Co. of Canada, Ltd., Windsor, Ont.
- EYE**
The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.
- SADDLERY HARDWARE**
*Dominion Stamping Co., Walkerville, Ont.
- SAFES**
*Goldie & McCulloch Co., Ltd., Galt, Ont.
- SAMPLE CASES**
The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.
J. Eveleigh & Co., Ltd., Montreal, Que.
- SANDERS:**
*Berlin Machine Works, Ltd., Hamilton.
- SANDPAPER**
Delany and Pettit, Ltd., Toronto, Ont.
- SASH CORD, cotton**
Hamilton Cotton Co., Hamilton, Ont.
- SALT**
Canadian Salt Co., Ltd., Windsor, Ont.
- SANITARY PAPER TOWELS:**
*E. B. Eddy Co., Ltd., Hull.
- SAW SHARPENING MACHINERY**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.
- SAWS**
Henry Disston & Sons, Ltd., Toronto.
Shurly & Deitrich, Galt, Ont.
- SAWS, band:**
*Berlin Machine Works, Ltd., Hamilton.
- SAWS, crosscut**
*Berlin Machine Works, Ltd., Hamilton.
- SAWS, crosscut and oand**
Shurly & Deitrich, Galt, Ont.
- SAWS, circular mill**
Shurly & Deitrich, Galt, Ont.
- SAWS, hack:**
*Victor Saw Works, Ltd., Hamilton, Ont.
- SAWS, of all kinds**
Simonds Canada Saw Co., Ltd., Montreal, Que.
- SAWS, rip:**
*Berlin Machine Works, Ltd., Hamilton.
Shurly & Deitrich, Galt, Ont.
- SAWMILLS**
G. & J. Esplen, Montreal, Que.
*The Waterous Engine Works Co., Ltd., Brantford, Ont.
- SAWS, specialties**
*Victor Saw Works, Ltd., Hamilton, Ont.
- SCALES**
The Gurney Scale Co., Hamilton, Ont.
- SCALES, counter**
The Gurney Scale Co., Hamilton, Ont.
- SCALES, railway track, etc.**
The Gurney Scale Co., Hamilton, Ont.
- SCREENS:**
*Canada Wire & Iron Goods Co., Hamilton.
*Jeffrey Mfg. Co., Montreal.
- SCREEN DOORS AND WINDOWS**
Sanderson-Harold Co., Ltd., Paris, Ont.
Ham & Nott Co., Ltd., Brantford, Ont.
- SCREWS**
*John Morrow Screw & Nut Co., Ltd., Ingersoll.
*The National Acme Mfg. Co., Montreal.
*The Steel Company of Canada, Limited, Hamilton.
- SCREW PLATES**
*Butterfield & Co., Rock Island, P.Q.
- SECURITIES, engraved**
American Bank Note Co., Ottawa, Ont.
- SERGES**
Rosamond Woollen Co., Almonte, Ont.
- SHAFTING.**
Canada Forge Co., Ltd., Welland, Ont.
*Canadian Drawn Steel Co., Ltd., Hamilton.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
*Union Drawn Steel Co., Ltd., Hamilton, Ont.
*Dodge Mfg. Co., Ltd., Toronto.
- SHANTY BLANKETS.**
Slingsby Mfg. Co., Ltd., Brantford, Ont.
- SHAPERS:**
*Berlin Machine Works, Ltd., Hamilton.
- SHEAR BLADES, iron**
The Peter Hay Knife Co., Ltd., Galt, Ont.
- SHEATHING**
*Paterson Manufacturing Company, Toronto and Montreal.
- SHEATHING, asbestos corrugated:**
*Eureka Mineral Wool & Asbestos Co., Toronto.
- SHEET METAL WARE (iron, galvanized and enamelled)**
Sheet Metal Products Co. of Canada, Ltd., Toronto.
- SHEET METAL STAMPINGS**
Acme Stamping & Tool Works, Ltd., Hamilton, Ont.
- SHELLAC**
*Berry Bros., Ltd., Winnipeg.
- SHINGLES, asbestos cement:**
*Canadian H. W. Johns-Manville Co., Toronto.
- SHIRTS**
MacKenzie & Co., Ottawa, Ont.
Williams, Greene & Rome, Berlin, Ont.
Peerless Overall Co., Rock Island, Que.
John W. Peck & Co., Ltd., Montreal, Que.
- SHIRTS, workmen's**
A. R. Clarke & Co., Ltd., Toronto.
- SHOE PEGWOOD**
O. Chalifour, Quebec, Que.
- SHOE LININGS**
Galt Knitting Co., Ltd., Galt, Ont.
- SHOES, running and athletic**
Ames-Holden-McCready, Ltd., Montreal, Que.
- SHOOKS**
Barchard & Co., Ltd., Montreal, Que.
- SILVER BULLION**
Coniagas Reduction Co., Ltd., St. Catharines, Ont.
- SILVERWARE**
Toronto Silver Plate Co., Ltd.
- SILVERSMITH**
Canadian Wm. A. Rogers, Ltd., Toronto.
Standard Silver Co., Toronto.
- SILVERWARE, sterling**
Roden Bros., Ltd., Toronto.
- SINKS, enameled**
Amherst Foundry Co., Ltd., Amherst, N.S.
- SKATES, figure**
Canada Cycle & Motor Co., Ltd., Toronto.
- SKATES, genuine Acme**
Canada Cycle & Motor Co., Ltd., Toronto.
- SKATES, hockey**
Canada Cycle & Motor Co., Ltd., Toronto.
- SKATES, ice**
Canada Cycle & Motor Co., Ltd., Toronto.
- SKIFFS**
Peterboro Canoe Co., Ltd., Peterboro, Ont.
- SKYLIGHTS:**
*Metallic Roofing Co., Ltd., Toronto.
*Pedlar People Ltd., Oshawa, Ont.
- SLEIGHS**
Tudhope-Anderson Co., Ltd., Orillia, Ont.
- SLIPPERS**
Ames-Holden-McCready, Ltd., Montreal, Que.
- SMOKE CONSUMERS,**
*The Jones Underfeed Stoker Co., Ltd., Toronto.
- SOAPS**
J. Barsalou & Co., Ltd., Montreal, Que.
- SOAP (soft, oil)**
The Imperial Varnish & Color Co., Ltd., Toronto.
The Sherwin-Williams Co. of Canada, Ltd., Montreal.
- SODA WATER FOUNTAINS**
J. J. McLaughlin, Ltd., Toronto.
- SOIL PIPE**
Anthes Foundry, Ltd., Toronto.
- SOLDER**
Alonzo W. Spooner, Ltd., Port Hope, Ont.
*The Canada Metal Co., Toronto.
- SOLDER, silver**
Geo. H. Lees & Co., Hamilton.
- SOLDER, wire and bar**
*American Can Co., Montreal, and Hamilton.
- SNOWSHOES**
Holt, Renfrew, Ltd., Quebec, Que.
- SPARK PLUGS**
Canadian Carbon Co., Ltd., Toronto.
- SPIRAL CONVEYORS.**
Canadian Mathews Gravity Carrier Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
- SPLIT PEAS**
H. Murten, Guelph, Ont.
- SPIKES, railway and marine**
Starr Mfg. Co., Ltd., Dartmouth, N.S.
- SPIRITS**
The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.
*Hiram Walker & Sons, Ltd., Walkerville, Ont.
- SPORTING MEDALS AND TROPHIES**
Roden Bros., Ltd., Toronto.
- SPRAYERS**
Spramotor Co., London, Ont.
- SPRING COTTERS**
*Richards-Wilcox Canadian Co., Ltd., London, Ont.
- SPRINGS**
*Canadian Steel Foundries, Ltd., Montreal, Que.
B. J. Coghlin Co., Ltd., Montreal, Que.
Guelph Spring & Axle Co., Ltd., Guelph, Ont.
- SPRINGS, carriages and automobile**
Guelph Spring & Axle Co., Ltd., Guelph, Ont.
- SPRINKLER SYSTEMS.**
*Chicago Bridge & Iron Works, Bridgeburg, Ont.
*General Fire Equipment Co., Ltd., Toronto.
*Purdy, Mansell, Ltd., Toronto.
*Vogel Co. of Canada, Ltd., Montreal.

STAINS

R. C. Jamieson & Co., Ltd., Montreal, Que.

STAINS, creosote shingle

A. Muirhead Co., Ltd., Toronto.

STAMPINGS

*Dominion Stamping Co., Ltd., Walkerville, Ont.

STAMPS, steel, brass and rubber
Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

STAMP MILLS:

*Jenckes Machine Co., Sherbrooke.

STATIONERY, office

Harris Lithographing Co., Toronto.

STEAM PIPE AND BOILER COVERINGS, asbestos:

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

STEAM SHOVELS

*M. Beatty & Sons, Ltd., Welland, Ont.

STEAM SPECIALTIES:

*Sheldons, Ltd., Galt.

STEAM TRAPS

*Canadian Sirocco Co., Windsor, Ont.

*Canadian Morehead Manufacturing Co., Limited, Woodstock.

STEEL:

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

STEEL BILLETS & BLOOMS

*The Steel Company of Canada, Limited, Hamilton.

STEEL BUILDINGS

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*Dominion Bridge Co., Ltd., Montreal.

*Pedlar People, Ltd., Oshawa, Ont.

STEEL CASTINGS

*Canadian Steel Foundries, Ltd., Montreal, Que.

*Dominion Steel Foundry Co., Ltd., Hamilton.

STEEL PEN STOCKS:

*Jenckes Machine Co., Sherbrooke.

STEEL RODS:

*The Steel Co. of Canada, Ltd., Hamilton.

STEEL SASH:

*Dennis Wire & Iron Works, Co., London.

*Henry Hope & Sons, Ltd., Toronto.

STEEL SHELVING:

*Dennis Wire & Iron Works, Co., London.

STEEL WIRE RODS

*The Steel Company of Canada, Limited, Hamilton.

TELEPHONE ACCESSORIES,

*Northern Electric Co., Limited, Montreal.

STENCILS, brass

Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

STEREOTYPING

Central Press Agency, Toronto.

STOKERS,

*The Jones Underfeed Stoker Co., Ltd., Toronto.

STOOLS AND BENCHES, piano and organ

*Otterville Mfg. Co., Ltd., Otterville, Ont.

STONE

The Corinthian Stone Co., Guelph, Ont.

The Hagersville Contracting Co., Hagersville, Ont.

STORE FITTINGS

The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

STOVES

Tudhope-Anderson Co., Ltd., Orillia, Ont.

Bedford Stove Co., Bedford, Que.

STOVE BOARDS

Sheet Metal Products Co. of Canada, Ltd., Toronto.

STOVE LININGS

Standard Clay Products, Ltd., St Johns, Que.

STOVES AND RANGES

Bedford Stove Co., Bedford, Que.

Gurney Foundry Co., Ltd., Toronto.

Lee Mfg. Co., Ltd., Pembroke, Ont.

The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

McClary Mfg. Co., London, Ont.

STRETCHERS, lace curtain

*Otterville Mfg. Co., Ltd., Otter

STRUCTURAL STEEL

Dominion Bridge Co., Montreal.

*Hamilton Bridge Works Co., Ltd., Hamilton.

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*The Structural Steel Co., Ltd., Montreal.

SUIT CASES

J. Eveleigh & Co., Ltd., Montreal.

The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.

SURFACERS:

*Berlin Machine Works, Ltd., Hamilton.

SWITCHBOARDS

*The Canadian Independent Telephone Co., Ltd., Toronto.

SWITCHBOARDS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

SWITCHES (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

SWITCHES, railway

Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

SWITCHES AND FROGS

*Canadian Steel Foundries, Ltd., Montreal, Que.

SWITCH STANDS

*Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

TABLES, billiard

Samuel May & Co., Toronto.

TABLE COVERS, chenille

Hamilton Cotton Co., Hamilton, Ont.

TAGS, shipping and factory

Business Systems, Ltd., Toronto.

TANKS

*Chicago Bridge & Iron Works, Bridgeburg, Ont.

Goold-Shapley-Muir Co., Ltd., Brantford, Ont.

*Ontario Wind Engine & Pump Co., Ltd., Toronto.

*The Goldie & McCullough Co., Ltd., Galt.

*The Watrous Engine Works Co., Ltd., Brantford.

TANNERS' SUPPLIES

McClary Mfg. Co., London, Ont.

TAPS

Pratt and Whitney Co. of Canada, Dundas, Ont.

*Butterfield & Co., Rock Island, P.Q.

TAP WRENCHES

*Butterfield & Co., Rock Island, P.Q.

TAPES, measuring

The Lufkin Rule Co., of Canada, Ltd., Windsor, Ont.

TAPES, paper and cloth, gummed and ungummed

Gummed Papers, Ltd., Brampton, Ont.

TELEPHONE ACCESSORIES

Canadian Independent Telephone Co., Toronto.

*Northern Electric Co., Limited, Montreal, Que.

TELEPHONE APPARATUS

*The Canadian Independent Telephone Co., Ltd., Toronto.

TELEPHONES, Automatic

*Canadian Independent Telephone Co., Toronto.

TENTS

Mackenzie & Co., Ottawa, Canada.

Turner, J. J., & Sons, Peterborough, Ont.

*Scythes & Co., Ltd., Toronto.

TERRA ALBA

*Albert Mfg. Co., Hillsborough, N.B.

TERRA COTTA (architectural)

Toronto Plate Glass Importing Co., Ltd., Toronto.

THEATRE CURTAINS, asbestos:

*Canadian H. W. Johns-Manville Co., Toronto.

THUMB SCREWS:

*Canadian Billings & Spencer, Ltd., Welland.

TILING, interlocking rubber.

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber, Ltd.

TIMBER:

*The B.C. Mills Timber & Trading Co., Vancouver, B.C.

TIME RECORDERS

*International Time Recording Co. of Canada, Ltd., Toronto.

TIN WARE (stamped, pierced, japanned and lithographed)

Sheet Metal Products Co. of Canada, Ltd., Toronto.

TIRES, cycle, auto and truck.

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber, Ltd.

TRADE MARKS AND DESIGNS

Ridout & Maybee, Toronto.

TRANSFORMERS

*The Canadian Crocker-Wheeler Co., Limited St. Catharines.

TRANSFORMERS, power

*Canadian Crocker Wheeler Co., Ltd., St. Catharines, Ont.

TRANSFORMERS, distributing

*Canadian Crocker Wheeler Co., Ltd., St. Catharines, Ont.

TOOLS, track

B. J. Coghlin Co., Ltd., Hamilton, Ont.

TRANSMISSION MACHINERY.

*Dodge Mfg. Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*The Watrous Engine Works Co., Ltd., Brantford.

TROLLEYS.

*Richard-Wilcox Canadian Co., Limited, London, Ont.

Northern Crane Works, Limited, Walkerville.

TRUCKS

The Gurney Scale Co., Hamilton, Ont.

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

Northern Crane Works, Limited, Walkerville.

TRUCKS, brick, tile and lumber

*Watrous Engine Works Co., Ltd., Brantford.

TRUNKS

Lamontagne Ltd., Montreal, Que.

J. Eveleigh & Co., Ltd., Montreal, Que.

The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.

TUBING, Brass and Copper

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

Canadian Seamless Wire Co., Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

TUBING, Gold and Silver

Canadian Seamless Wire Co., Toronto.

TUMBLERS, foundry

Northern Crane Works, Limited, Walkerville.

TURBINES, water.

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

TURBINES, steam:

*The Canadian Crocker-Wheeler Co., Limited St. Catharines.

TURBINE AND RECIPROCATING PUMPS.

*The Bawden Machine Co., Limited, Toronto.

TWEEDS

Rossmund Woollen Co., Almonte, Ont.

TWINES

*Doon Twines Ltd., Doon, Ont.

TWINES, binder

Brantford Cordage Co., Ltd., Brantford, Ont.

TWINES, cotton

Hamilton Cotton Co., Hamilton, Ont.

TWIST DRILLS

Pratt and Whitney Co., of Canada, Dundas, Ont.

*The Wilt Twist Drill Co., Ltd., Walkerville, Ont.

UNDERWEAR

Galt Knitting Co., Ltd., Galt, Ont.

UNDERWEAR, imperial

Kingston Hosiery Co., Ltd., Kingston, Ont.

UNIONS

*Dart Union Co., Ltd., Toronto, Ont.

*Otterville Mfg. Co., Ltd., Otterville, Ont.

UNDERWEAR TRIMMINGS

The Whitby Braid & Edging Co., Woodstock, Ont.

UPHOLSTERED FURNITURE, leather and tapestries
Imperial Rattan Co., Ltd.

VACUUM PUMPS

*The Bawden Machine Co., Limited, Toronto.

VALVES

*Kerr Engine Co., Ltd., Walkerville.

*T. McAvity & Sons, Limited, St. John, N.B.

VALVES, for steam and water

Jenkins Bros., Ltd., Montreal, Que.

VALVES, regrinding globe, angle cross checks, swing checks, etc.

Penberthy Injector Co., Ltd., Windsor, Ont.

VARNISHES

*Ault & Wiborg Co. of Canada, Ltd., Toronto.

Berry Bros., Walkerville, Ont.

*Dougall Varnish Co., Ltd., Montreal.

R. C. Jamieson & Co., Ltd., Montreal, Que.

Sherwin-Williams Co. of Canada, Ltd., Montreal.

VAULTS and VAULT DOORS:

*The Goldie & McCullough Co., Ltd., Galt.

VENTILATING APPLIANCES:

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

*Sheldons, Ltd., Galt.

VENTILATING SYSTEMS

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

Gurney Foundry Co., Ltd., Toronto.

VENTILATORS:

*The Metallic Roofing Co. of Canada, Ltd., Toronto, Ont.

*Pedlar People, Ltd., Oshawa, Ont.

VINEGAR

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

WAGONS

Tudhope-Anderson Co., Ltd., Orillia, Ont.

WALL BOARD

*Bird & Son, Hamilton, Ont.

WALL COPING

Standard Clay Products, Ltd., St. Johns, Que.

WASHERS

*The Steel Company of Canada, Limited, Hamilton.

WASHERS, plate or wrought

London Rolling Mill Co., Ltd., London, Ont.

WASTES, wool and cotton

Factory Waste and Metal Co., Montreal, Que.

*Scythes & Co., Ltd., Toronto.

WATER-PROOF CEMENT COATING

Benjamin Moore & Co., Ltd., Toronto.

*Paterson Manufacturing Company, Toronto and Montreal.

WAXED PAPER

Business Systems, Ltd., Toronto.

WEBBING, elastic

Hamilton Cotton Co., Hamilton, Ont.

WEBBING, non-elastic

Hamilton Cotton Co., Hamilton, Ont.

WHEELS

*Canadian Car & Foundry Co., Ltd., Montreal, Que.

WHEELS, corundum

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

WHEELS, emery

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

WHEELS, propeller, iron and steel

*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

WHEELS, turbine, water.

*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

WHEELS, water (impulse type)

WELL DRILLING TOOLS AND MACHINERY

Oil Well Supply Co., Ltd., Petrolia, Ont.

WHIPS AND LASHES

Lay Whip Co., Rock Island, Que.

WHISKY

*Hiram Walker & Sons, Ltd., Walkerville, Ont.

WHITE ARSENIC

Coniagas Reduction Co., Ltd., St. Catharines, Ont.

WHITE ENAMEL

*Berry Bros., Ltd., Winnipeg.

WHITE LEAD

Brandram-Henderson, Ltd., Montreal, Que.
A. Ramsay & Son Co., Montreal, Que.

WINDMILLS

*Gould-Shapley-Muir Co., Ltd., Brantford, Ont.
*Ontario Wind Engine & Pump Co., Ltd., Toronto.

WINDOW SHADES

Daly & Morin, Montreal, Que.

WIRE

*The Steel Company of Canada, Limited, Hamilton.
*Eugene F. Phillips, Electrical Works, Ltd., Montreal.
The Graham Nail Works, Toronto.

WIRE CLOTH

*Canada Wire & Iron Goods Co., Hamilton.
C. H. Johnston & Sons, Ltd., Montreal, Que.

WIRE, feeder and trolley:

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRED GLASS:

*Metallic Roofing Co., Ltd., Toronto.

WIRE GUARDS

*Canada Wire & Iron Goods Co., Hamilton.
C. H. Johnston & Sons, Ltd., Montreal, Que.

WIRE, Insulated Electric,

*Northern Electric Co., Limited, Montreal.

WIRE, insulated electric:

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRE ROPE

The Dominion Wire Rope Co., Ltd., Montreal.
*The B. Greening Wire Co., Ltd., Hamilton.

WIRE, Weatherproof:

*Northern Electric Co., Limited, Montreal.
*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRE WORK

C. H. Johnston & Sons, Ltd., Montreal, Que.
*Canada Wire & Iron Goods Co., Hamilton.
*The Geo. B. Meadows, Toronto Iron and Brass Goods Works Co., Ltd., Toronto.

WOOD

Standard Fuel Co., Toronto.

WOOD PRINTERS

Barchard & Co., Ltd., Toronto.

WOOD PULP, mechanical

La Cie de Pulpe de Chicoutimi, Chicoutimi, Que.

WOOD SPLIT PULLEYS.

*Dodge Mfg. Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.

WOOL

*H. V. Andrews, Toronto.

WORSTED COATINGS AND SUITINGS

Rosamond Woollen Co., Almonte, Ont.

WRAPPERS, book, bottle, etc.

*The Thompson & Norris Co., of Canada, Ltd., Niagara Falls, Ont.

WROUGHT IRON PIPE

*The Steel Company of Canada, Limited, Hamilton.

WROUGHT PIPE:

*The Steel Co. of Canada, Ltd., Hamilton.

YARNS, cotton

Hamilton Cotton Co., Hamilton, Ont.

ZINC, electrical

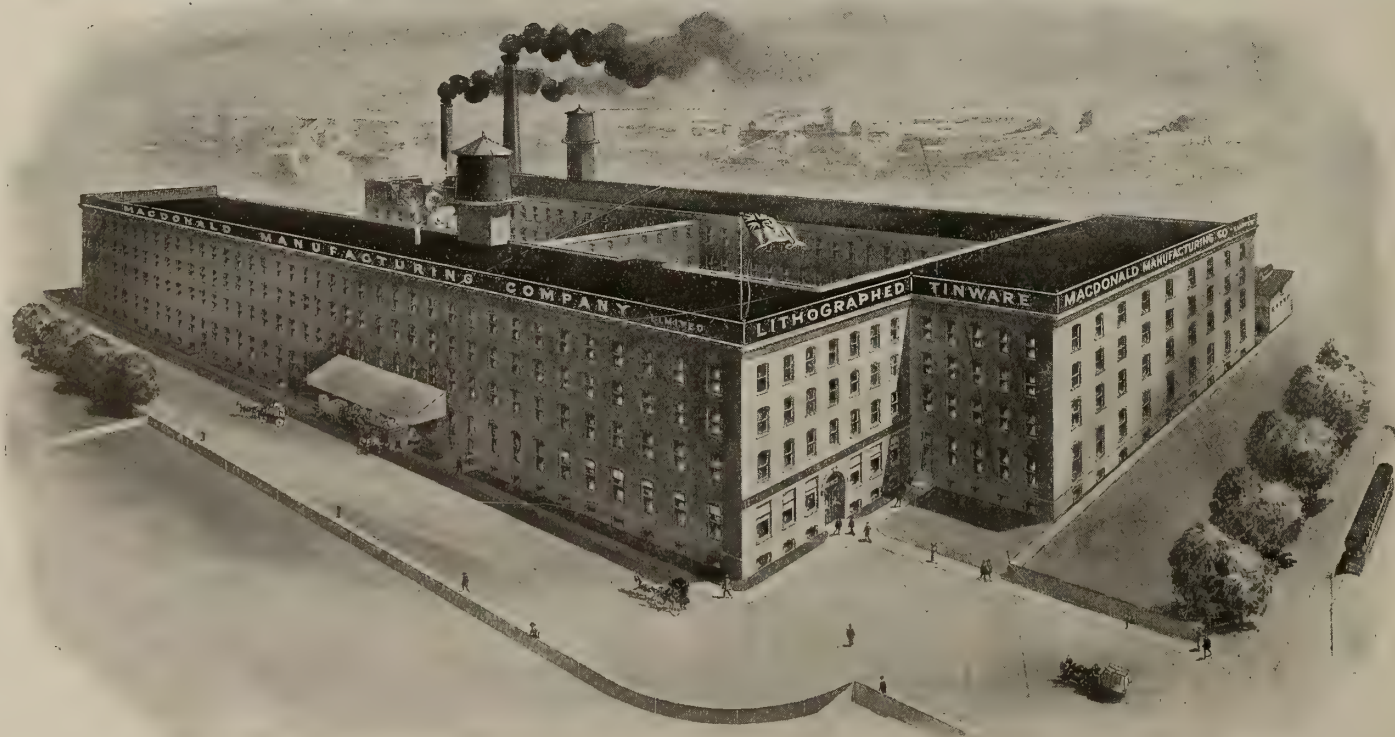
*The Canada Metal Co., Toronto.

* For Display Advertisement See Index Page 803

THE BOOTH-COULTER COPPER & BRASS COMPANY, LTD.

SHEETS TUBES COPPER & BRASS AND RODS

SPECIAL SIZES CUT TO ORDER FROM LARGE STOCK—PROMPT SHIPMENT
115-121 SUMACH STREET TORONTO, CANADA



MACDONALD MANUFACTURING CO., LIMITED, TORONTO

We Specialize on Cans or Boxes required for Customer's Exclusive use
Practically Nothing Else made in our Entire Plant
This Ensures Undivided Attention to Your Particular Order

PLAIN OR DECORATED TIN BOXES AND SIGNS

INDUSTRIAL CANADA



"THE CHIEF TEST"

YOU ask for my opinion of Advertising as a business policy, and what it has done for the firm of J. S. Fry and Sons, Ltd. In reply, I might well ask, What has it NOT done? I would describe Advertising as the chief text in the Gospel of Business.

WITHOUT it we could never have given—and be giving—employment to so many thousands of workers, or have benefited so many millions of people by our manufactures.

ONE would say as the result of practical knowledge that all forms of Advertisements are good and beneficial, relatively though in my opinion—I give it for what it is worth—those in Newspapers and Magazines are probably more far-reaching in their results.

FROM long experience I am convinced that, as Sir William Lever so well puts it, "the firms which have continued to advertise have benefited enormously and so will continue advertising."

Is it not undeniable that the success of nearly all our great commercial concerns has been largely due to the application of this educational and dynamic principle?

Of course it can only be expected to succeed where the commodities concerned are intrinsically good and valuable in themselves and able to stand the test of time.

MR. CONRAD P. FRY,
of J. S. Fry & Sons, Ltd., in the Daily News.

For more than a decade Fry's advertising and the advertising of Lever Bros., Limited in Canada have been prepared and placed by

J. J. GIBBONS, LIMITED

General Advertising Agents

MONTREAL

Cables—Gibjay, Toronto.

Head Office:

TORONTO

WINNIPEG

Codes—Liebers. ABC 5th Edition

PUBLISHED BY THE CANADIAN MANUFACTURERS ASSOCIATION INCORPORATED.

HEAD OFFICE BRANCH OFFICES,

• TORONTO • MONTREAL, HAMILTON, WINNIPEG, VANCOUVER, HALIFAX, QUEBEC.

MALLEABLE IRON CASTINGS

The Pratt & Letchworth Company Limited

BRANTFORD ONTARIO

AUTOMOBILE PARTS
DROP FORGINGS



We have erected and are now operating

THE LARGEST COMMERCIAL DROP FORGE PLANT IN CANADA

We are equipped to handle large forging contracts.
This expansion also increases our stamping facilities.
We stand by our Motto: Quality and Service.

SHEET METAL WORK
GENERAL STAMPINGS

DOMINION FORGE & STAMPING CO., LIMITED
Walkerville - Ontario



"Giving Satisfaction"

This is the true measure of a manufacturer's service to his constituency. It has been our constant aim since we commenced to do business eight years ago. Our large and rapidly expanding trade is proof that our products and our methods of doing business appeal to our customers.

The greatest possible care and attention are given at our Refinery to the manufacture of the different lines—the highest obtainable quality being our goal. The statement "WE MAKE THAT GOOD OIL" has now passed into a proverb as referring to the products of The British American Oil Co.

We guarantee every gallon of British "Peerless" and Motor Gasolene, Benzine, Lamp Oil, Lubricating Oil, "Ford Motor Oil," "Autolene" for other motors, Fuel Oil, Road Oil and other Products.

We are prepared to live up to the guarantee that if any of our goods are not as represented they may be returned at our expense and money will be refunded if already paid for same. In no case will we allow a customer to make a loss on account of our products not being equal to representation.

We make our products as good as we know how and have justifiable confidence in them. Our customers have a right to demand value for their money and we see that they get it. We do not pose as philanthropists; this is pure business.

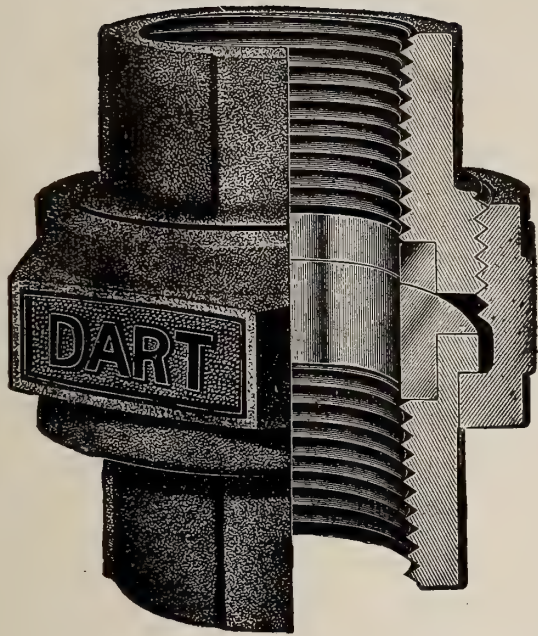
Our watchword is "GIVING SATISFACTION."

The BRITISH AMERICAN OIL CO., Limited

REFINERS, FOOT OF CHERRY STREET, TORONTO

Head Office: LUMSDEN BUILDING, TORONTO

Branches: MONTREAL, OTTAWA, LONDON, WINDSOR



Leaking Pipe Connections

AND

Dart Unions

are Never at the Same Joint.

Every Leak, No Matter How Small, Means Loss.

Dart Unions, and Your Jobber Sells Them, Prevent Loss.

Use Proves Best.

Sample Waiting for You.

DART UNION CO., LTD., Toronto

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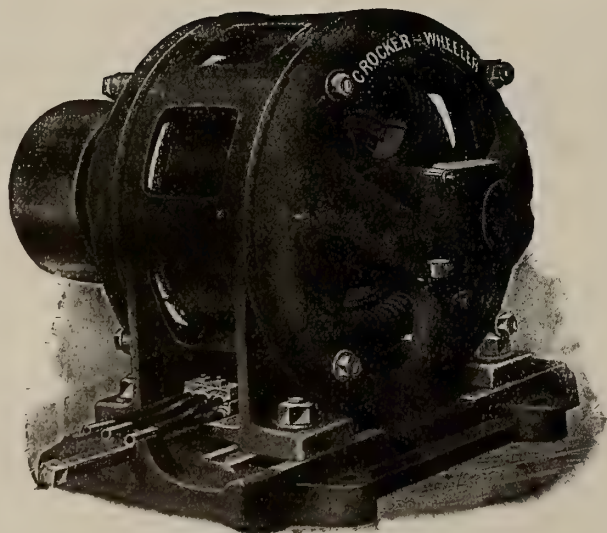
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FOR BUYERS, GUIDE SEE PAGE 1004.



THE DESIGN OF CROCKER-WHEELER INDUCTION MOTORS

INCLUDES :

Heavy Shafts

Large Journals

High Power Factor

Excellent Efficiency

They have many other desirable features;
Bulletin 155 describes them.

THE CANADIAN CROCKER - WHEELER CO., Limited

MANUFACTURERS AND ELECTRICAL ENGINEERS

Head Office and Works : St. Catharines

District Offices : Montreal, Toronto, Vancouver

We Have Prepared the Way

WE HAVE SPENT thousands of dollars on Street Car patrons impressing on them the advantages of purchasing "Made-in-Canada" Products.

We were the first in the field with a "Made-in-Canada" campaign, prepared, placed and carried out entirely at our own expense, for the benefit of Canadian Street Car advertisers.

Canadian Manufacturers

who use Street Car advertising get the direct benefit of all the money we have spent, in addition to getting the greatest possible amount of the best advertising for every dollar of their own they spend on Street Car space.

There are 1,735,685 passengers carried daily on the street car lines we control throughout Canada, and with these we have prepared the way for "Made-in-Canada" campaigns.

They are ready to purchase goods made in Canada, but they have to be told what goods are made here.

At a cost of only One Dollar you can reach over 48,000 of these consumers through an advertisement in the Street Cars.

Let us tell you more about it. Any of our offices will respond promptly to a request for information.

The
Canadian Street Car Advertising Company
Limited

MONTREAL

TORONTO

WINNIPEG



“NAMCO” CANADIAN MADE

SCREWS NUTS STUDS

NAMCO Service to Canadian Buyers of Standard Screw Products is backed by an output of thousands of screw machine parts daily.

THREE THINGS WE OFFER

A Source of Supply You Can Depend Upon
A Product True to Standards
Consistent Uniformity

Here's the assortment of NAMCO Standard Screw Products carried in stock.

Cap and Set Screws
V., U.S. Standard Thread
S.A.E. Standard
Steel Screws
Studs—V Thread

Nuts—Plain
S.A.E. or V. Thread
Nuts—Castellated
S.A.E. Thread
Hexagon Brass Nuts

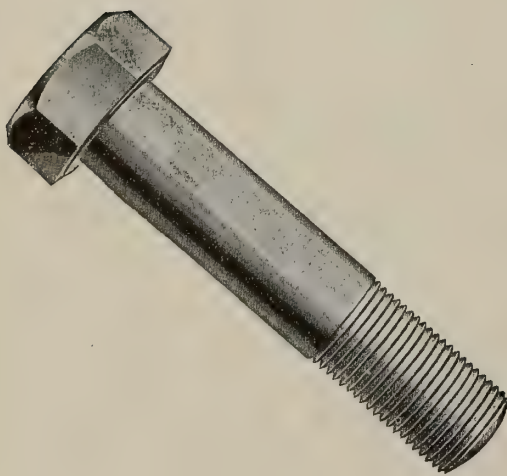
Special Screw Cutting to individual specifications and samples.
Capacity up to 2½ in. diameter bars.

Ask for the “Red Book,” a complete guide for buyers of Standard Screw Products.

The National-Acme Mfg. Co.

De Courcelles St.
and G.T.R., St. Henri

MONTREAL, P.Q.



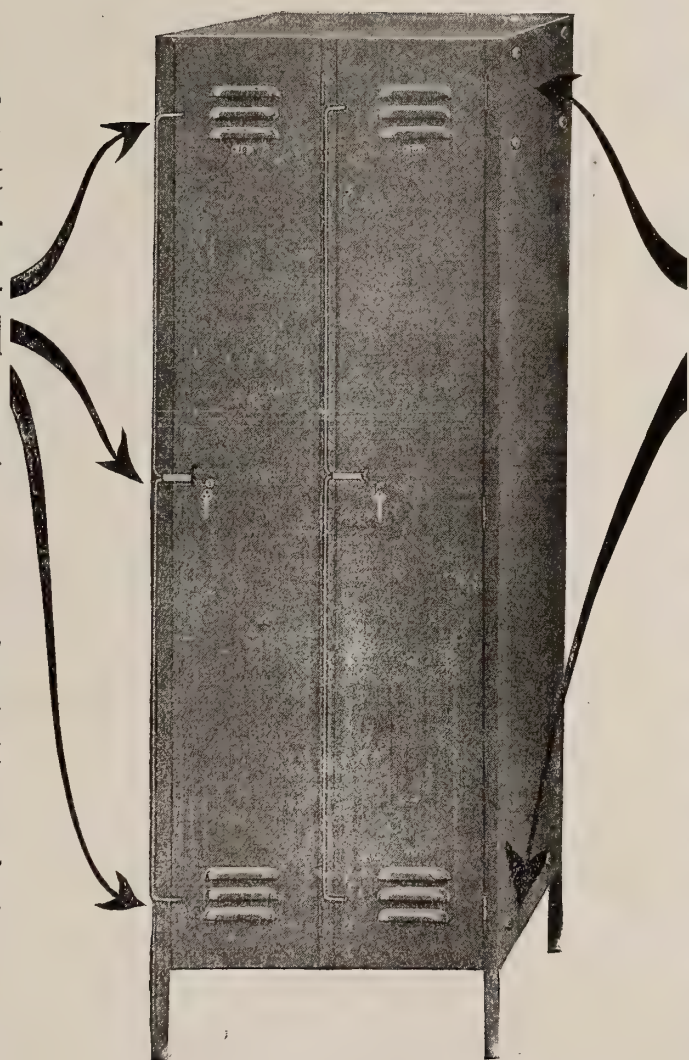
Meadows Factory Lockers

Designed Especially to Meet the Requirements of the
Workmen and the Pockets of the Manufacturer

Made-in-Canada

The "SURE-GRIP" patented three-point lock secures the door positively at three different points and prevents it from being sprung out at top and bottom.

Lockers may be furnished equipped with padlocks or cabinet locks with flat key. We recommend padlocks for Factory Lockers.



The component parts of the MEADOWS LOCKER, besides being connected in the ordinary way, are tightly bound together by the SIX THROUGH BOLTS as indicated.

The batteries assembled in this manner are extremely rigid.

Finished in black or olive green, baked enamel.

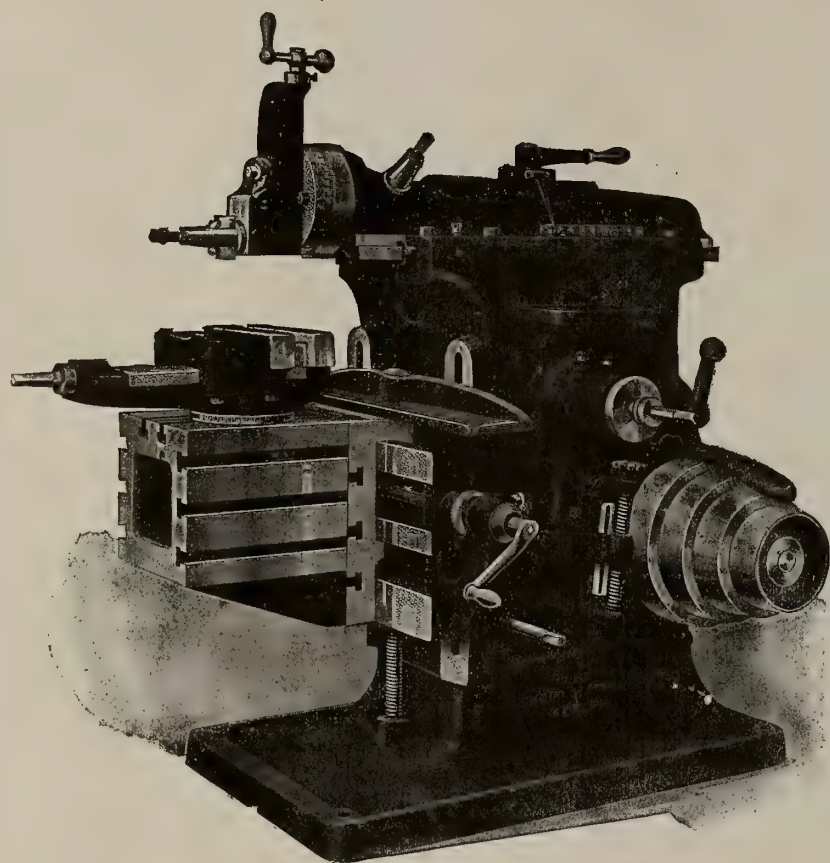
On account of increasing cost of steel,
the prices of Lockers are steadily rising.
Buy your Lockers now and save money.

**THE GEO. B. MEADOWS, Toronto Wire, Iron and
Brass Works Company, Limited**

479 WELLINGTON ST. WEST

TORONTO, CANADA

When writing advertisers, please mention INDUSTRIAL CANADA.



SHAPER

MADE-IN-CANADA

And used throughout Canada in shops where good service is essential.

Our machines are built for work. They are accurate, reliable and capable of sustaining the wear of continuous operation.

WRITE FOR CATALOGUE

The
**D. McKenzie Machinery
Company**

GUELPH - - - ONTARIO

Eddy's Matches

Are made of strong dry pine stems, with a secret perfected composition that guarantees

“Every Match a Lighter”

Sixty-five years of knowing how—that's the reason!

THE E. B EDDY COMPANY, LTD.
HULL, CANADA

All Eddy's Products are dependable—*always.*



For Your Files

BERLIN SANDERS

The Latest Views on Sand- ing Operations FREE!

**Clip the
Coupon
Get the Book**

*48 pages of the
most interesting
and instructive
information ever
compiled on this
important
finishing method.*

We are not interested in any sanders now, but will be glad to place the book on file, if you will send it without expense or obligation.

Remarks.....

Name.....

Address.....

For Mr.....

Fill out and mail this coupon—NOW!

FOR the convenience of you who give close attention to every sanding operation and the machines best adapted for your particular work and conditions, this book will offer invaluable suggestions.

No one type of sander is suitable for all classes of work. The peculiar size and shape of your particular stock may best be handled with greatest economy and perfect workmanship on the latest Roll-feed Sander, either with one, two, three, four or six drums.

Then again an Endless-Bed feed may best serve your purpose. Or perhaps a flexible belt sander may save considerable by finishing such work as you can now only do by hand.

Each type of Berlin Sander is adapted for a definite purpose, yet all "overlapping" one another in usefulness to insure highest efficiency of operation on the work in hand.

To judge such usefulness, requires first-hand information. The book above supplies a definite knowledge.

Our Service Department is in position to supply you, without expense or obligation, with data on the latest sanding methods used in every kind of factory where sanders are used. Why not avail yourself of such help?

THE BERLIN MACHINE WORKS, LTD. - Hamilton, Ont.

MADE RIGHT—RIGHT

IN CANADA

Berlin

A Question For Your Consideration

Do you check up the *service* that your taps give you? How long do they last? What is their life?

The cost of taps is one element of your manufacturing cost. If a Butterfield tap works faster, lasts longer and does a better job than the kind you use, it will reduce your cost of production.

It does.

Butterfield & Co. Inc.

ROCK ISLAND, QUE., CANADA



Economy and Accuracy IN SCREW THREAD GAGING

The upper contact points are set to the maximum size—the lower to the minimum. Lay the screw between the upper points and let it "find its own level." Can anything be simpler?



JUST RIGHT

Varying judgment of individual workmen is entirely eliminated by the use of

WELLS LIMIT GAGES

Send us an outline of your requirements. We will plan the gages for your output.

Wells Bros. Company of Canada, Limited

GALT - ONTARIO

Manufacturers of the celebrated *Little Giant* line of
TAPS, DIES and SCREW PLATES, GAGES AND REAMERS

MORROW

SET SCREWS

CAP SCREWS

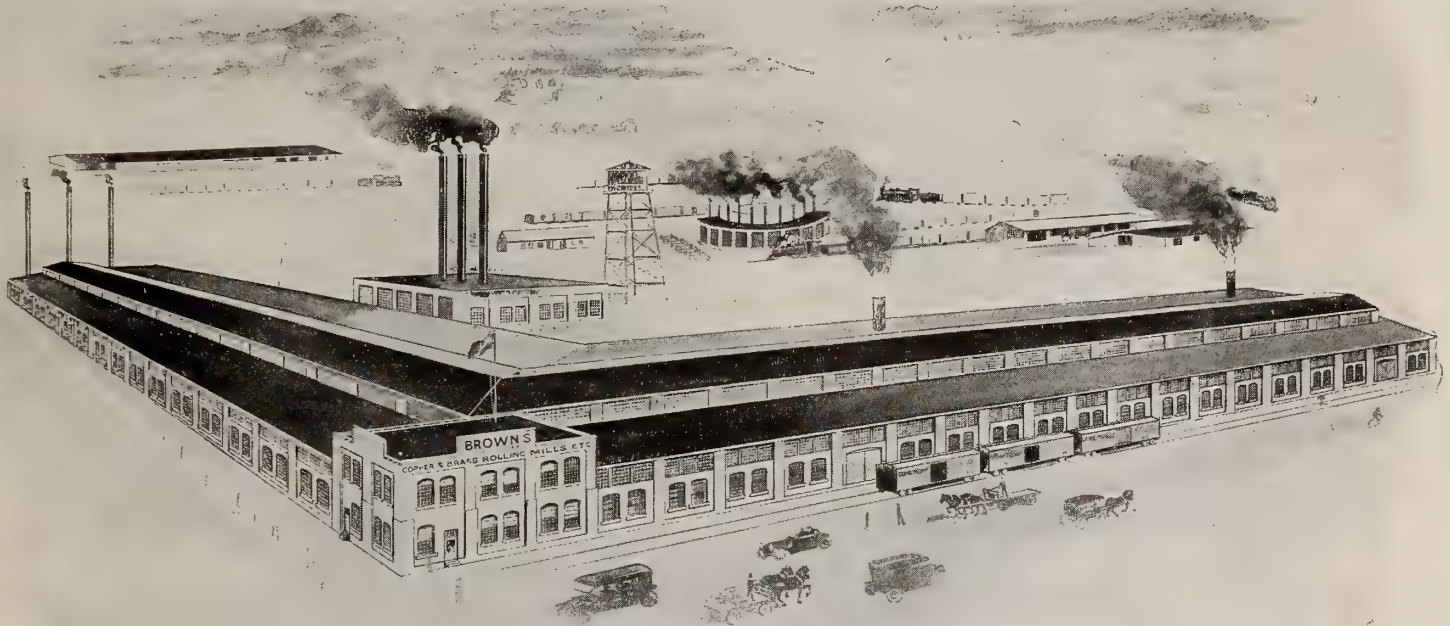
TWIST DRILLS

NUTS



WE earnestly request our customers to specify as far ahead of their actual needs as possible. Our desire is to take good care of all customers and give as good delivery as is possible, and customers will greatly assist by anticipating their requirements, and placing orders *now* for *future delivery*.

INGERSOLL



BUY YOUR BRASS RODS, BARS AND SHEETS WHERE QUALITY AND SERVICE ARE BEST

We are rolling Brass Rods, Bars and Sheets in our new plant at New Toronto.

For months we have been running to our capacity day and night.

The most exacting tests have been applied to our products. Every pound of brass which is used in the making of war munitions is subjected to the closest examination by Government inspectors.

Whatever your requirements are they can-

not demand a finer product than that which we are producing. Our factory and equipment are complete and unexcelled. Over 400 skilled workmen carry through the necessary operations.

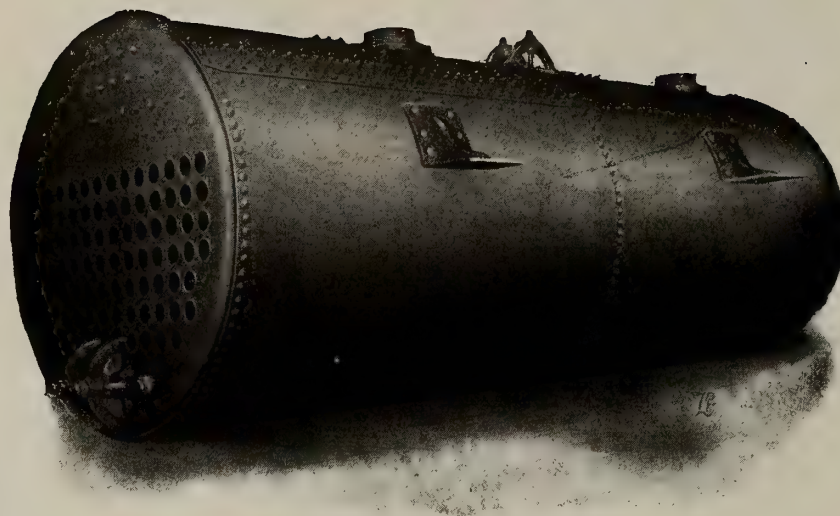
Let us quote on **your** requirements. It will be to your advantage to get your supplies in Canada from a Canadian mill. You will be independent of foreign conditions.

For Drilling and Free Turning Order "Beaver" Brand Rod

Brown's Copper and Brass Rolling Mills New Toronto

When writing advertisers, please mention INDUSTRIAL CANADA.

BOILERS



STANDARD RETURN TUBULAR BOILER

We make boilers of all kinds for any service.

We are also sole Canadian makers of Erie City Water Tube Boilers, Vertical and Horizontal.

The large number of pleased and satisfied owners of "INGLIS" Boilers is our best advertisement.

For (52) fifty-two years our boilers have been the standard. We have installations of our different types of boilers, which our representatives will be pleased to show to prospective purchasers. Write us for prices, etc.

INGLIS' PRODUCTS ARE "MADE-IN-CANADA"

The John Inglis Company, Limited

ENGINEERS AND BOILERMAKERS

14 Strachan Avenue

Toronto, Canada

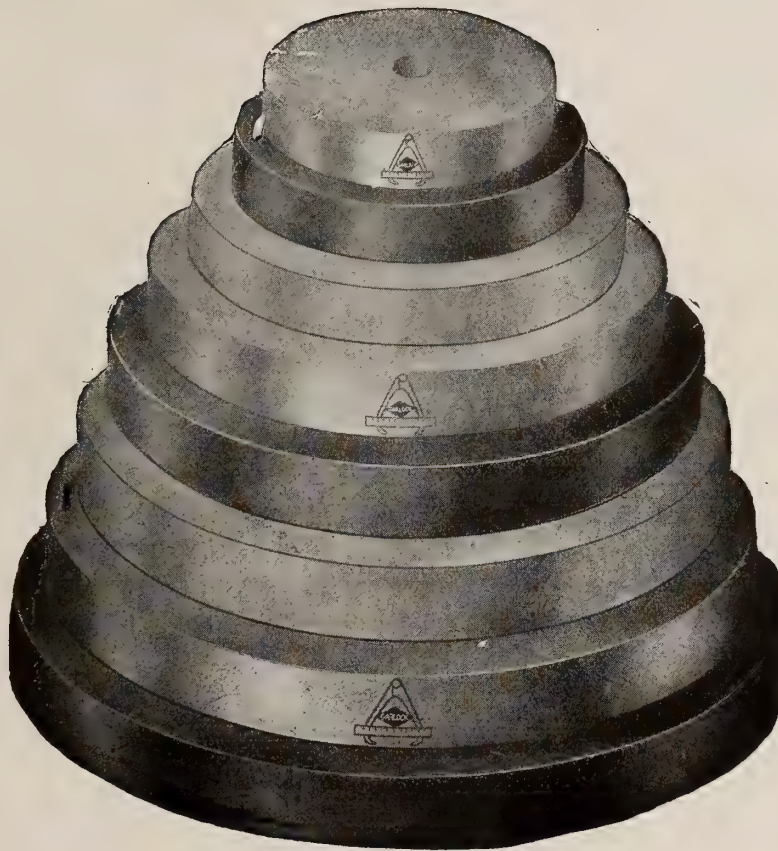
Ottawa Representative: J. W. ANDERSON, 7 Bank Street Chambers



GARLOCK



P
U
M
P



V
A
L
V
E
S

The service of pump valves depends upon the compounds as well as the consistency and cure of the valves. The compounds used in Garlock pump valves have been established after years of trial in actual service and under the most severe conditions. Pump valves should always be used for the purposes for which they are intended. The following are a few of our leading styles and grades of valves :

- Style No. 139—For medium pressure cold water.
- “ “ 175—For high pressure cold water.
- “ “ 182—For warm or greasy water.
- “ “ 108—For hot water.
- “ “ 105—For boiling water.
- “ “ 154—For air compressors and condensers.

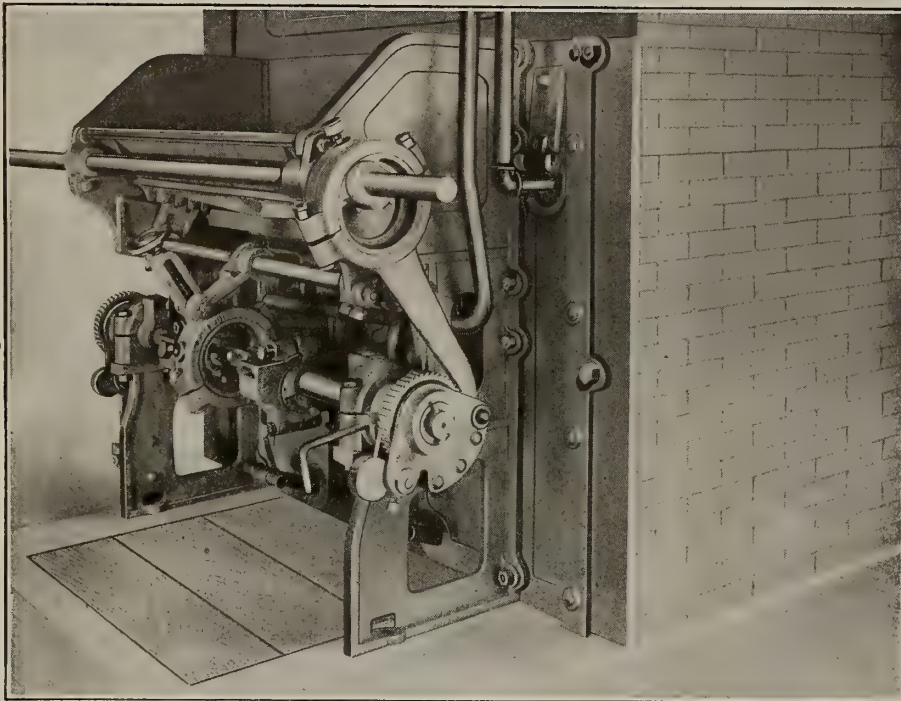
We guarantee our pump valves to give satisfactory service when used under conditions for which they are intended.

THE GARLOCK PACKING COMPANY
HAMILTON, ONTARIO

Branches :

Montreal, Quebec	342 St. James St.
Toronto, Ontario	404 Continental Life Bldg.
Winnipeg, Manitoba	Galt Bldg.





No. 4807, Fulton Watercooled Stoker Under an H. R. T. Boiler. Flush Front.

THE HARE ENGINEERING COMPANY

LIMITED

HEAD OFFICE : 115 KING ST. EAST, TORONTO, ONTARIO

LOWER FUEL COSTS
BY INSTALLING THE

FULTON STOKER

Some of the recent installations in Canada :

Chipman-Holton Knitting Co., Hamilton, Ont.
Hinde & Dauch Paper Co., Ltd., Toronto, Ont.
Canada Forge Company, Ltd., Welland, Ont.
City Dairy Company, Ltd., Toronto, Ont.
City of Toronto, Pumping Station

The above aggregate 3,010 H.P.

SEND FOR BULLETIN F-106 I
A POSTCARD WILL BRING IT

MADE IN CANADA
15,000 H.P. IN USE

Sales Agencies :

Montreal, Port Arthur, Winnipeg, Calgary,
Edmonton, Vancouver and Chicago, Ill.



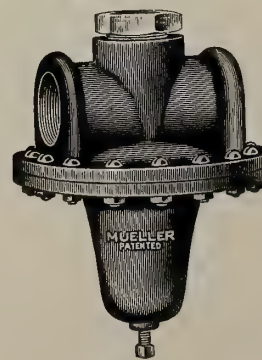
HERE IS A Brass Gate Valve

You will find it
always made from
High Grade Steam
Metal and beauti-
fully finished.

They are not made of one quality
this year and another next. Always
reliable and worth the price you pay.

The Kerr Engine Co., Limited
VALVE SPECIALISTS
WALKERVILLE - ONTARIO

No Bother, No Fuss— Always Exact Regulation



13160. MADE IN CANADA

Hitch a Mueller to your line—then you will
realize that the exact Mueller standard is YOUR
standard.

The Mueller Type 13160 Regulating and Reducing Valve
is a good valve. Built to stand the wear and tear of hard
usage; built to give exacting service all the time on water,
steam, air, oil, etc.

We make a very complete line of reducing and regulating
valves.

Ask for our Catalog No. 5—send the coupons NOW.

H. MUELLER MFG. CO., LTD.
SARNIA, ONTARIO
Makers of High Grade Water, Plumbing and Gas Brass Goods

Central Station Economy In Your Own Power Plant

WATEROUS HIGH SPEED McEWEN ENGINES

These engines are built specially for use in the isolated plant. High speed and close regulation recommend them for electric light and power production, mill work and general industrial purposes.

Closeness and speed in regulation are their outstanding features. No difficulty is experienced in adjusting McEwen Engines to govern within the limit of one revolution and the instantaneous variation in speed when full load is thrown on or off is usually less than 2%.

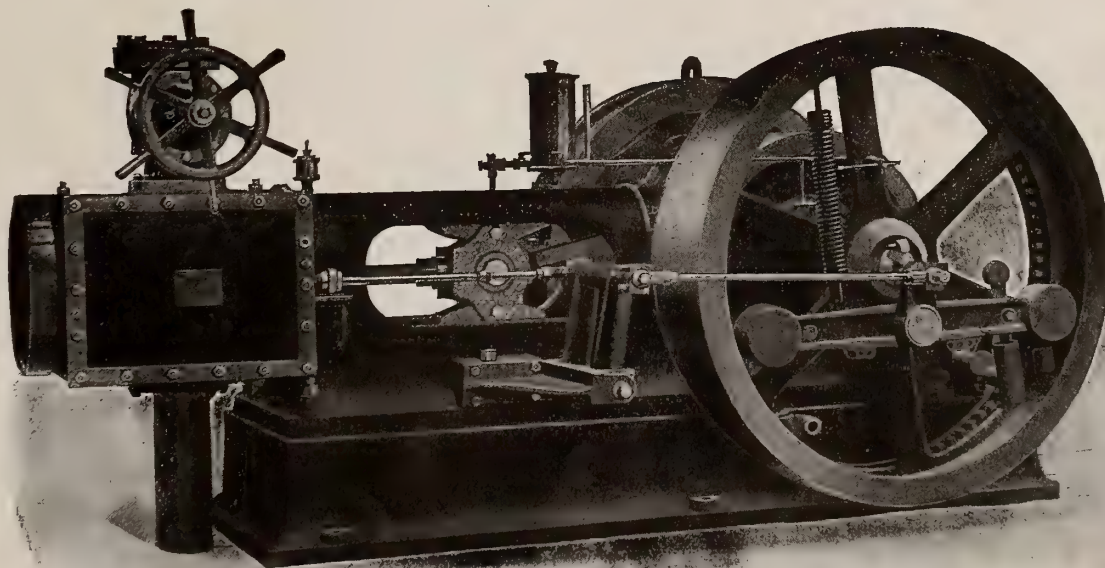
Ability to absorb overload, low maintenance cost, simplicity of operation and great strength of all parts are outstanding features of the McEwen.

In hundreds of Canadian power plants producing their own power you will find McEwen Engines in use. They are in operation because they are developing power that is not only cheap but absolutely reliable as well.

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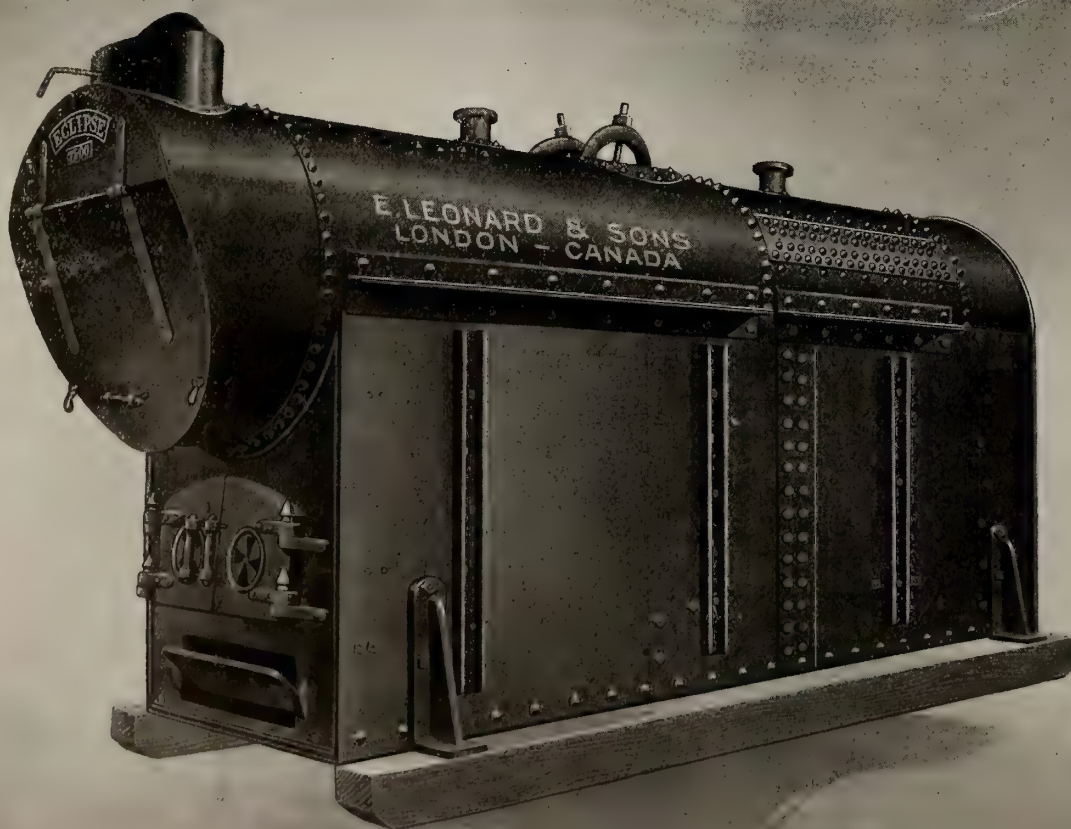
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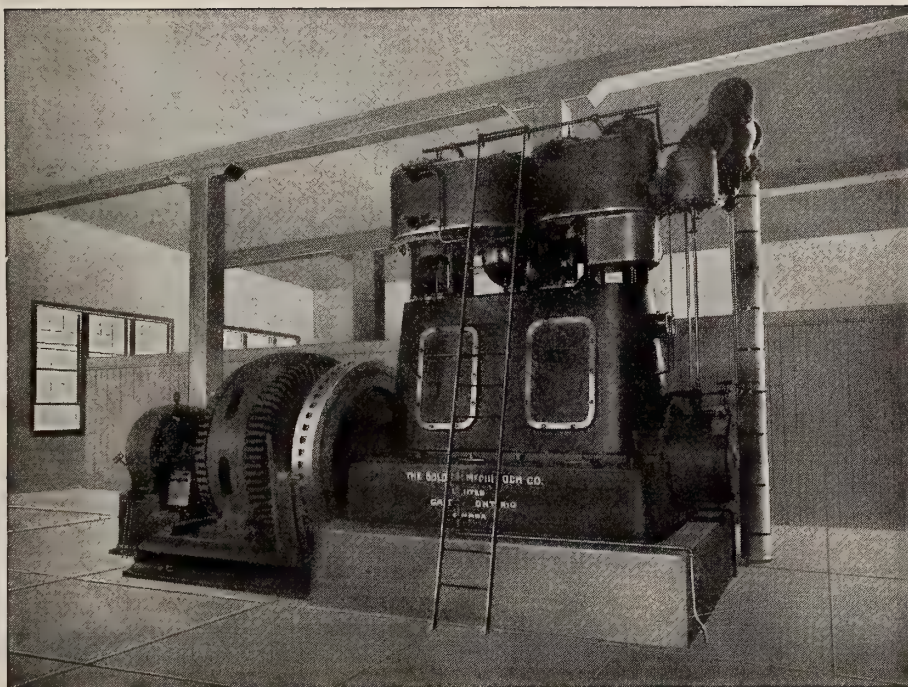
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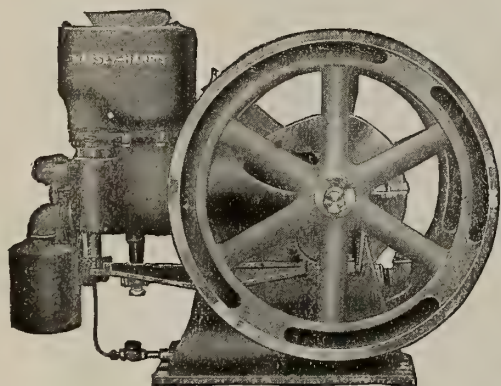
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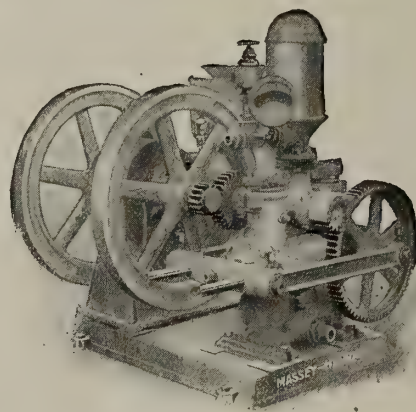
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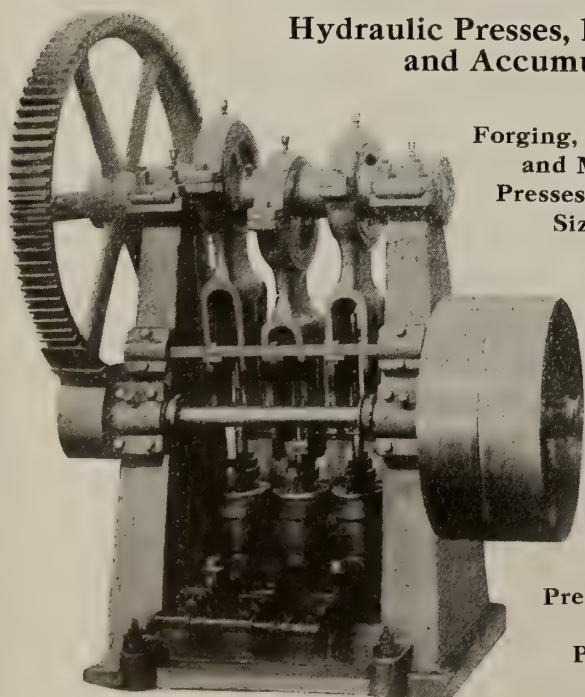
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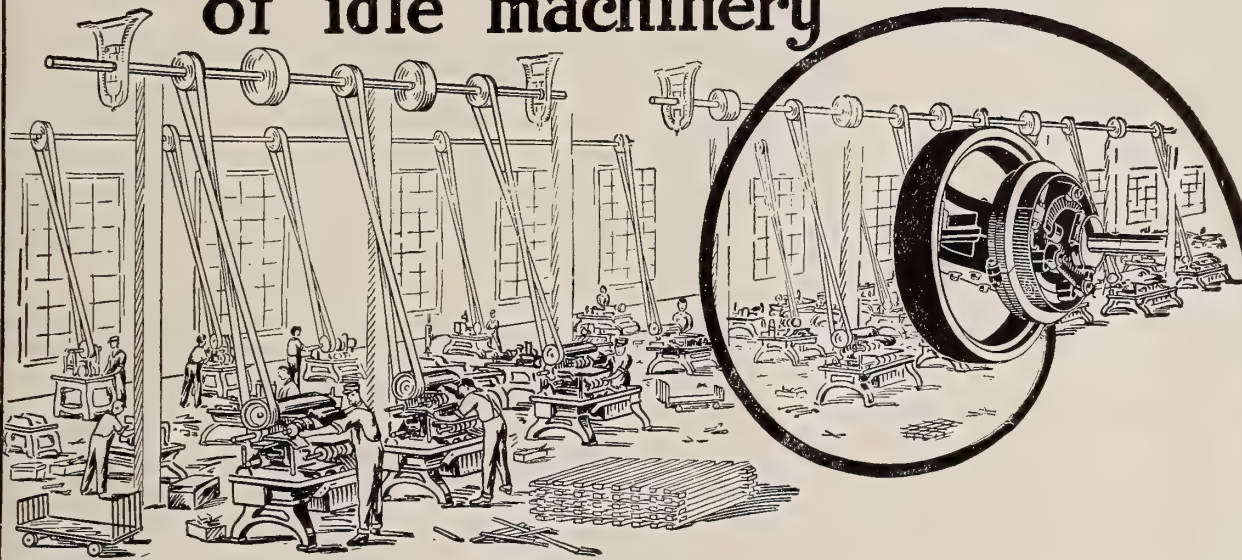
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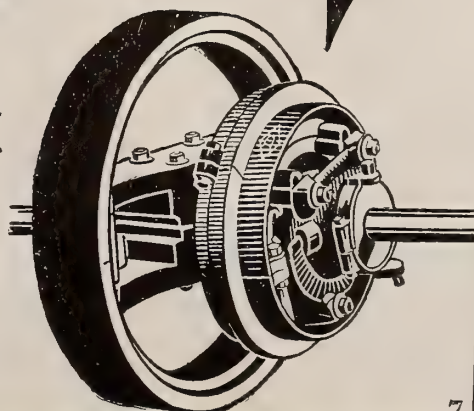
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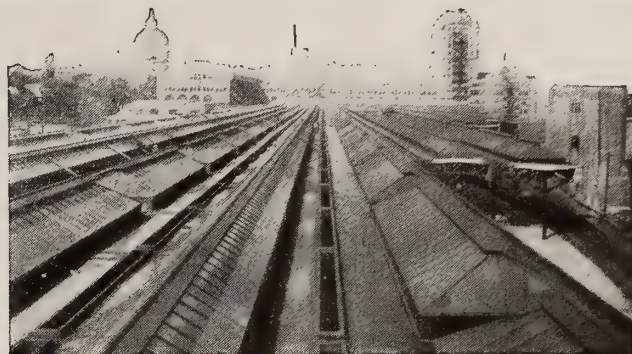
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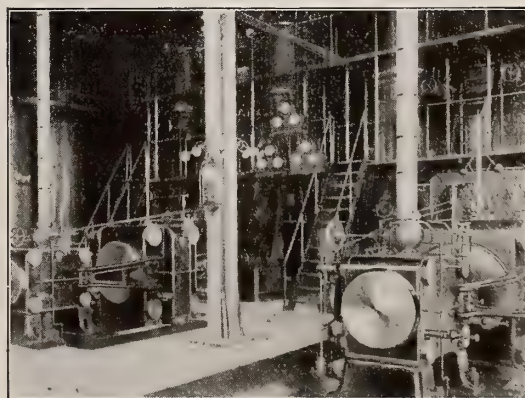
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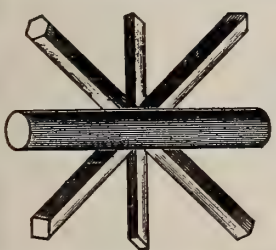
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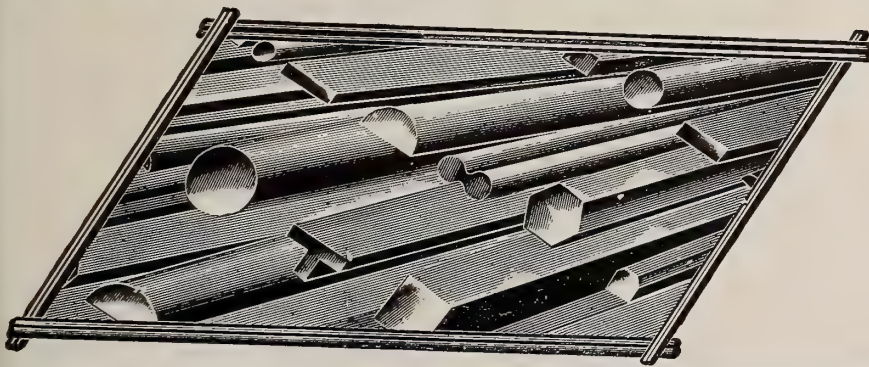
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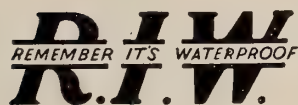
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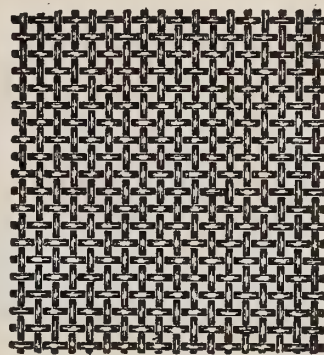


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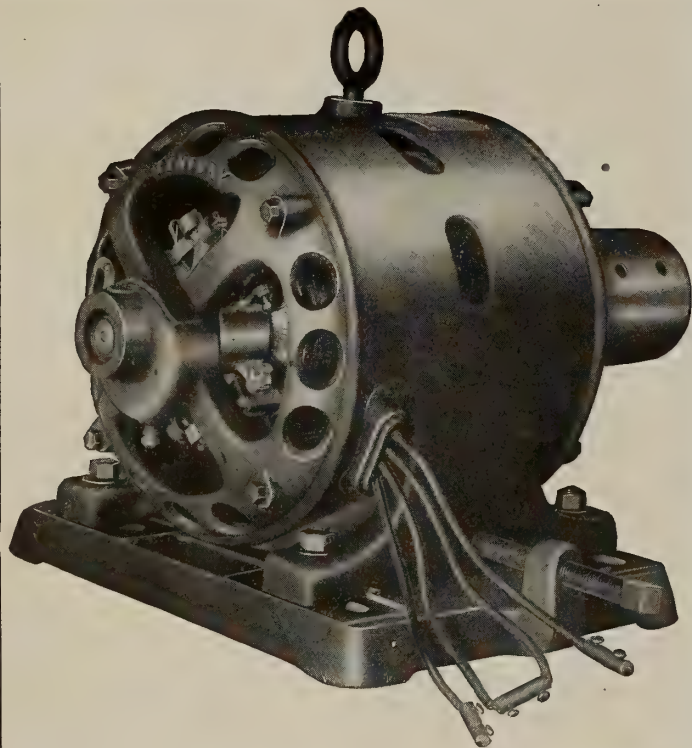
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Vol. XVI.

TORONTO, JANUARY, 1916

No. 9

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The Forest Products Laboratories.

CANADA took a forward step of real importance in the field of industrial research last month when she opened up her Forest Products Laboratories in Montreal.

While it will be the function of the Laboratories to investigate the industrial possibilities of only one of our numerous sources of wealth, the results they are able to show can hardly fail to stimulate a desire for inward searching in other directions. And certainly the time for such inward searching as a nation is now here. Our industrial development is dependent to a very great extent upon the development of pure and applied science, notably the latter. Canada will profit of course by the results of research in other countries, but Canada will never attain her full and true development until the problems peculiar to herself, and the resources of a kind which she alone possesses, are made subjects for scientific study by skilled investigators.

The Forest Products Laboratories are commencing their career under particularly happy auspices. The Minister of the Interior, who will be responsible to Parliament for them, looks upon their establishment with justifiable pride as a real achievement. Next in authority is Mr. R. H.

Campbell, Director of Forestry, a clever, far-sighted and public-spirited officer, who has been given a free hand to select his staff wholly outside considerations of politics. Dr. J. S. Bates, the Superintendent, is a chemical engineer of unusual ability, who does his work thoroughly and conscientiously, with an eye to scientific accuracy and practical service, rather than to effect. McGill University is putting its whole weight behind the institution, while prominent scientists and business men are enthusiastically contributing their services in an advisory capacity.

The formal opening of the laboratories was fittingly made the occasion for utilizing the experimental paper machine to run off the first blotting paper ever made in Canada. Filter paper, which is of similar texture, and likewise a new product for Canada, has also been made. The Laboratories are now engaged in developing methods for the production of methyl acetone, of which great quantities are required in the manufacture of explosives. In these and other ways they will co-ordinate science and industry, and open up for Canada possibilities of production heretofore untouched.

Manufacturers and business men everywhere will watch their progress with interest, and will hope that their practical beginnings may prove but the forerunner to bigger and more comprehensive efforts to follow.

Employment for Returning Soldiers.

IT is a very natural, and for that reason a very common mistake, on the part of those who are studying the returned soldier problem, to look to our manufacturing industries as the main channel through which to provide these men with suitable occupations.

To begin with, it may be taken for granted that every manufacturer will gladly find a place for an old employee who has done his bit, and come back physically able to resume his former duties, even though he has to discharge some one else to do so. He should have no compunctions about laying off an unmarried man, who has not gone to the war, in order to provide work for an ex-employee, married or unmarried, who has done his duty by his country. More than that, we venture to predict that the great majority of manufacturers, without any promptings either from the Canadian Manufacturers Association or from Soldiers' Aid Commissions, will look upon it not simply as

a duty, but as a pleasure to find light work of some sort for the old employee who comes back to him with scars of battle that may have impaired his power, but not his will to serve.

If these surmises be correct, and if manufacturers as a class can be depended upon to provide employment for the men who were actually engaged in industrial occupations prior to enlistment, then they will be doing about all that can reasonably be expected of them. Manufacturers will show no inclination to shirk their fair responsibilities; they will do their share, probably more than their share. What they urge, and urge in the strongest possible terms, is that the same diligence with which they are being canvassed may characterize the efforts to place returned soldiers in other occupations.

One of the greatest, if not the greatest avenue of absorption ought to be our agricultural industry. Canada would be healthier, happier and more prosperous if a larger proportion of her population were profitably engaged in tilling the soil. Inexperienced men would of course have small chances of success if they tried their hand at agriculture without guidance or supervision, but under some system of community settlement people of little or no experience could be instructed and aided with satisfactory results to themselves and advantage to the whole country.

All parts of Canada are in need of good roads, and if extensive improvements of this kind were planned well in advance they would serve as a safety-valve by furnishing stop-gap employment for thousands of men until such time as more congenial work became available for them.

The point to be remembered is that when the war is over, thousands and thousands of men will come back with a rush. It would be fatal to await their arrival before deciding what we will do with them. The time for thoughtful study, for wise planning, is now, and we would welcome more evidence than has yet been forthcoming that our Governments, upon whom after all the responsibility must rest, are making adequate preparations to handle the situation.

From the Entente Cordiale to the Entente Commerciale.

BY sending a delegation of business men to encourage trade between France and North America, the French Government has shown itself keenly alive to the part which this continent is destined to play in future world trade. The enormous accumulation of wealth in the United States is certain to be followed by increased purchases of the best of everything which other countries have to offer, and France, with commendable foresight, is planning now to secure her share of that market. On the other hand, the resources of both the United States and Canada will have to be drawn upon freely for the reconstruction of the devastated areas of Europe, once the war is over, and France is taking this means of letting the world know that she does not propose to allow her own plans to be interfered with by waiting till other countries have first secured their supplies from North America.

It behooves us Canadians to return France's visit, and so convert the situation as far as possible to our own profit and advantage. Towards the United States, France has every reason to feel friendly, because of the assistance in materials which that country has given her, but towards Canada she feels drawn by ties of enduring affection because of the thousands of valiant soldiers we have sent to help her in her fight for liberty. What we have done has been done from a sense of right and duty, not with any hope of reward, but if rewards are forthcoming in the way of larger trade, then we would be less than human if we did not cherish the desire that ours should be in proportion to the sacrifices we have made.

Monsieur Damour, who acted as spokesman for the party who visited Canada, is reported as expressing the opinion that the blood which France and Britain are shedding in a common cause would bind them together in ties of eternal friendship. While France naturally wished to secure for herself as much as possible of the trade which Germany had lost, she would like nothing better than to buy from a country that rendered her such magnificent assistance. "England and France," he says, "have fought side by side, and will trade side by side for the mutual benefit of their people when the war ends."

As Britain's greatest overseas dependency Canada is certain to share in the trade advantages to which the situation now developing will give rise. And Canada will be foolishly neglecting a wonderful opportunity if she waits to take what is given her instead of pressing the sentimental advantage she now possesses. Let us make up our minds not to allow the United States to do all the courting. We don't mind the United States being one of the invited guests at the wedding, but we want to make sure of being there ourselves as one of the family.

Compensation Legislation in the West.

ONTARIO having set the example for the rest of Canada by taking a high dive into the uncertain waters of advanced compensation legislation, the other provinces are one by one getting ready to take the plunge. Without waiting to see whether Ontario struck any snags or not, Nova Scotia jumped right in after her, and now Manitoba and British Columbia are trying the water with their toes to make sure it's not too cold.

From all accounts they are finding it somewhat chilly, at any rate in the deep spot chosen by Ontario for her performance. And we don't blame them. State Insurance, which is simply another name for Compulsory Mutual Insurance, may be a permissible experiment for a province whose factory employees number 238,000, as Ontario's did when the last census was taken, but it would probably prove a very risky experiment for British Columbia, with a factory population of only 33,000, and still more so for Manitoba, with a factory population of only 17,000.

All insurance is a gamble; stock insurance is a gamble for the stockholders, and mutual insurance is a gamble for the mutual policy holders. It is a well known fact, however, that insurance is less of a gamble for the big company, doing a large volume of business spread over a great number and variety of risks, than it is for a small company with only a few coverings, all in the one locality. There is such a thing as the law of averages. The big company gives that law a chance to show what it can do, and as a result its loss ratio is fairly well stabilized; the small company gives it hardly any chance at all, with the result that its loss ratio shows wide fluctuations. The big company is able to fix its rates with scientific accuracy; the small company can only fix its rates by guess-work. The big company is pretty sure to swim; the small company may swim if it is lucky, but it takes an awful chance of sinking. Manitoba and British Columbia would be in the position of the small company, and if their legislators are wise they will refuse to take so serious a chance when they don't need to.

If they do decide to go in for Compulsory Mutual Insurance, it will be obviously impossible for them to operate it on anything like the grouping system which Ontario has adopted. Ontario has nearly forty groups, and some of them are heterogeneous enough in all conscience. But the friction and dissatisfaction that has followed in that province from throwing together into one group manufacturers who have few hazards in common, would be a quiet little afternoon tea party compared with the rough house that the west would be sure to witness when, on the kind invitation of the Workmen's Compensation Board, a blacksmith, a jeweller, a confectioner and a glue maker got together for the purpose of working out rules for an Accident Prevention Association.

By all means let Manitoba and British Columbia do as Ontario has done, and see that reasonable compensation is paid for all industrial casualties, but let them be content, for the present at least, to effect such insurance with companies of ascertained standing, who know their business, rather than compel employers to assume the unknown contingent liabilities of mutual insurance.

Should War Profits be Taxed?

FROM a good many quarters the suggestion has been made that a portion at least of such additional revenues as the Government may require should be raised by levying a tax on war profits.

No doubt attention has been focussed on this plan by reason of the enormous profits which some concerns manufacturing munitions have been made to show by stock jobbers. Those profits may have been, probably were, largely fictitious, but the point is that the figures could hardly have been used without the knowledge and approval of the heads of the firms to whose businesses they related. Having sown the wind, therefore, these firms may have to reap the whirlwind, for if the Government undertook to

supplement its revenues by any new means at all, it would hesitate to ignore a source of income upon which public opinion would strongly insist.

Great difficulty would necessarily be experienced, however, in devising a scheme that would be equitable in its application. It would be manifestly unfair, for example, to tax the profits of the shell manufacturer and exempt the profits made by the manufacturer of army saddlery. If saddlery profits were to be taxed, why not tax the profits of the tanner who sold the saddler his leather? Carrying the argument back a further step, would it be right to tax the profits of the tanner and exempt the profits of the machinery builder who supplied the machines used to finish the leather bought by the saddler for making artillery harness? Without recalling in more detail "The House that Jack built," the question for decision is, at what point would the war-profit-taxers have us stop?

A possible solution would be to tax the surplus profits of every business, the surplus to be determined by comparison with some year to be designated as normal. This would at once lead to a wild scramble for a clause expressly declaring certain occupations as not being businesses within the meaning of the Act, and unless we are greatly mistaken, some of those who have been loudest in their demands for a tax on war profits would figure prominently among the successful exemptionists.

At first thought it impresses one as a problem it will be very difficult for the Government to ignore, but on more mature consideration it looks like a problem that the Government would do well to leave severely alone.

Western Manufacturers and War Contracts.

GRIEVANCES in connection with the methods adopted by the War Purchasing Commission in calling for tenders and awarding contracts appear to be as common as punch holes on a discarded meal ticket, and usually have about as little in them. If, however, the contentions noted below have any foundation in fact, then Western manufacturers can reasonably claim that they have not been getting a square deal.

When inviting tenders, the ordinary practice is to ask for prices f.o.b. Ottawa. On account of the long haul, and the occasional necessity of shipping by express where the time allowance is brief, the Westerner is under more or less of a handicap in meeting the competition of the Easterner.

So long as the goods are intended for consumption in the East he accepts the situation cheerfully, knowing that the conditions are such as he would have prescribed himself, had he been a member of the Commission. But it frequently happens that the cost delivered Ottawa is not the cost to the Government delivered at final destination. The West has its training camps just as the East has. The Eastern manufacturer, bidding on material that ultimately goes to some Western camp, doesn't have to submit a price delivered in the West, but simply a price delivered Ottawa. The Western manufacturer, bidding on that same material,

has to include in his price transportation charges over a long distance that the goods need never be sent at all. In other words, the practice of insisting on prices delivered Ottawa always operates to the advantage of the Eastern manufacturer, even when the geography should be against him, while sometimes it makes it necessary for the Commission to purchase at prices less favorable than could be obtained under different methods.

Why not establish a Stores Department, with a Purchasing Agent in charge at some Western point? Next summer there should easily be fifty thousand troops in training in Western camps, if not more. The west is within its rights in asking that it be given a fair chance to tender on supplies for the troops it has itself enlisted. In the manufacture of uniforms, shirts, gloves, knitted goods, saddlery and other essentials it has many plants of first-class efficiency whose location and capabilities for production offer possibilities in the way of economy that the Commission should not overlook.

Obstructing Interprovincial Trade.

WHILE on this subject of grievances as between Eastern and Western Canada, it occurs to us to mention that there's a little entry on the other side of the account which needs adjusting.

Nearly every province in the Dominion has a Steam Boiler Act, designed to protect life and property by means of regulations to be observed during construction, and inspection both then and afterwards. Among other requirements that have very properly been demanded is what is known as a factor of safety. It is usually considered by engineers that a factor of 4 is ample, and most provinces have ruled accordingly. Not only that, but to facilitate one another's work, and to reduce expenses both to the builder and the purchaser, they have entered into an arrangement whereby they will do one another's inspection while a boiler is under construction or alteration.

Apart from the fact that it simplifies matters for the boiler manufacturer to be able to build and turn into stock boilers that can be lawfully sold in any part of the Dominion, there is no particular reason why one province should not raise or lower the generally accepted factor of safety if it sees fit. But there is a very good reason why the Province of British Columbia should *not* demand a safety factor of 4.5 for boilers to be shipped in from Ontario or Nova Scotia when she accepts a safety factor of 4 for boilers built within her own borders. And British Columbia would be quick to appreciate that reason if other provinces discriminated against her goods for the benefit of their own producers.

If 4 is a proper factor of safety, for home built boilers, it ought to be a proper factor of safety for any Canadian boiler built under the regulations and inspection which British Columbia has prescribed. Boiler manufacturers on the Coast may well be grateful for the concern which Government officials have shown for their interests, but

they can hardly accept with complaisance an advantage secured by such questionable means.

Green—A Study in Far-Away Pastures.

WHY is it that so many men, who show more than ordinary astuteness in the every-day transactions of business life, fall easy victims to some third-rate advertising proposition put up to them by a man of whom they know nothing, representing a firm of whom they know less?

Not long since a plausible artist named Mitchell, who either had associates named Tijon and Hazledean or used those names as aliases, succeeded in interesting quite a number of manufacturers to the extent of taking space at the rate of \$50 a page in a publication known as the *Graphic Promulgator*, published by the Graphic Promulgating Society. The bait which Mitchell used on his hook was the prospect that his wonderful promulgator would prove the open sesame to foreign trade, bringing the advertisers enquiries galore for their goods from far overseas. He claimed for his book a high-class circulation, and as evidence of his good faith he promised that before demanding payment he would furnish for the advertiser's inspection post office receipts showing that at least a thousand copies had been despatched by registered mail to importing houses, Chambers of Commerce and Consular Agents in South America, Australia, Tasmania, New Zealand, South Africa and Japan.

In due course the society with the formidable name, so ably represented by Mitchell *et al.*, made good. It carried out its part of the contract. Now it is employing the services of a lawyer to collect its accounts. Some advertisers are beginning to feel that they have been done, and are trying to evade settlement. The fact that they may have made an unwise contract, however, doesn't relieve them from liability thereunder, for a contract is a contract, and they may as well settle and avoid costs.

But we don't blame them for wanting to get out of paying. From an advertising standpoint, the service given by the *Graphic Promulgator* is next to worthless. The book has no reading matter at all, not even an introduction. It has the appearance of a scrap book, filled with advertisements printed to uniform size and pasted on blank sheets, rather than a directory. Nine people out of ten receiving it would probably consign it at once to the waste paper basket as of no value whatever; the tenth person, if he had any curiosity at all, might spend a couple of minutes wondering what it was all about.

An examination of the post office receipts, of which there are 1,001 by actual count, would suggest that the mailing list had been prepared by culling names at random out of directories. As a result of the studious care thus taken by the publishers to advance the interests of an advertiser who, let us say, is a manufacturer of hardware, that advertiser's announcement is sent to a lot of importers of dry goods and groceries, who wouldn't be in the market to buy his line under any circumstances. He is made to pay,

therefore, for circulation that is partially, at least, of no use to him, whereas by using the directories himself, he could prepare a select mailing list of equal length, every address on which he could reach with four times as much reading matter at a total cost of \$20 for postage.

Apparently the game is a profitable one for the publishers, for besides the *Graphic Promulgator*, they have also issued an *Imperial Trader*, and an *International Trade Developer*, the one mailing list presumably doing service for all three. All the while they are as elusive as the proverbial flea. One letterhead gives their headquarters as at Bromley, Kent, but enquiry of the mayor of Bromley has brought information that the address shown is that of a private house; another letterhead gives as headquarters a New Zealand address which the Postmaster-General of that country reports to be a vacant lot. The lawyer who is doing the collecting, however, is a very real personality!

Getting Down to a Cash Basis.

PARADOXICAL as it may sound, some of the worst legislation, from the standpoint of law, ever placed upon the statute books of Saskatchewan, has proved to be best from the standpoint of results.

The Legislature of Saskatchewan is nothing if not paternal. Its constituency is made up largely of farmers, over whose interests it watches as jealously as a hen with one chicken. It looks upon the manufacturer as the farmer's traditional foe, because from the beginning of time in the West the manufacturer has sold the farmer implements on credit and has afterwards had the effrontery to ask for his money.

To protect the farmer who had thus gotten himself into the clutches of the implement maker, the Legislature has from time to time passed laws, some to make it easy for the farmer to void a contract, others to make it difficult for the manufacturer to repossess. Emboldened by success, it last year passed an Act which had the effect of wiping out a great deal of security which manufacturers had taken to protect themselves against past due debts.

Some time previous to that modest piece of confiscation implement makers had begun to feel that they were pursuing a wrong policy by selling on such liberal terms of credit in the West. After the passage of the Act referred to they more than *felt* that their policy was wrong—they *knew* it. Suiting their actions to their convictions, therefore, they decided upon a change of policy. Commencing 1916 they will not only be more careful whom they sell to, but will demand of even the most favored purchaser a larger cash payment and shorter terms on the balance. Eventually they will hope to put the business on a strictly cash basis.

After all why shouldn't farmers (perhaps it would be better to say why shouldn't some farmers) pay cash for their implements? When they go to buy a motor car they have to pay cash, and they do it without complaining. The money they spend on that motor car is money that their

implements have enabled them to earn, yet like as not they will buy the car for cash before they have the implements paid for.

There's no denying the fact that credit is a necessity to some farmers, and that without credit the West would never have been what it is to-day. But there's no denying the alternative and hardly less important fact that the generous credits given by implement manufacturers throughout the West have encouraged the farmers in very bad habits.

Those habits will never be corrected by statutes of the kind that Saskatchewan passed in 1915, but they can and will be corrected by the measures of self-defence which these same statutes are now forcing manufacturers to take.

Logwood Dyes.

IN placing an embargo on the export of logwood from Jamaica and British Honduras to all countries other than the United Kingdom, the British authorities have no doubt acted advisedly from the standpoint of self-preservation, but incidentally they have given Canadian industry a rather hard knock.

Prior to the outbreak of the war Germany practically supplied the world with dyes, for she had reduced the process of manufacturing aniline dyes to such a state of perfection that other dyestuffs were relegated to the ranks of inferior substitutes. The stoppage of exports from Germany naturally sent the price of dyes soaring sky-high in allied and neutral countries. Yet despite the seemingly prohibitive prices asked by speculators, every ounce of every shade was quickly snapped up and converted to industrial uses.

Upon the complete exhaustion of the supply manufacturers were left no alternative but to have recourse to vegetable dyes. In this category logwood occupies an important place, yielding as it does a very durable black that is invaluable not only in the production of blacks and grays, but in deepening other colors. To tanners, furriers, felt makers and woollen manufacturers, logwood extract is an absolute necessity now that aniline dyes are no longer obtainable, and unless some arrangement is speedily effected with the British Government whereby there will be released from time to time an amount sufficient for Canadian requirements, there will be nothing left for people in these lines of industry to do but shut up shop, partially if not wholly.

The situation is complicated by the fact that there has never been established in Canada a plant for making logwood extract. Nor would such a proposition be likely to prove attractive to capital under present conditions, for the total annual consumption in Canada is small, probably little more than 3,000 barrels of between five and six hundred pounds each, whereas the initial investment in the special machinery needed to chip the logwood would be heavy. And always of course there would remain the danger that upon the termination of the war and the resumption of trade relations with Germany, the demand would diminish almost to the vanishing point.

If Canada is to be taken care of at all, it would probably have to be under some arrangement that would permit of the logwood being shipped first to the United States, there to be treated by companies already established in that line of business, and subsequently to be exported to Canada. But will the United States Government stand for that unless her own manufacturers are similarly taken care of? And will the British Government, who virtually control the supply, show themselves willing to lift the embargo to such an extent?

The best energies of the Minister of Trade and Commerce have been directed upon the solution of the problem for some time past. More power to him!

Reviving the Surtax.

SPEAKING of dyes, some interesting facts have recently come to our notice that suggest the desirability of uniform action on the part of the Allies in placing a surtax on German imports after the war is over.

It seems that in the manufacture of aniline dyes certain residues are left which may be used as raw material for the manufacture of explosives; conversely, in the manufacture of explosives, certain residues are left which may be used as raw material for the manufacture of dyes. Since August, 1914, Germany's production of explosives has been on a stupendous scale. In keeping with her national policy of wasting nothing, the by-products of this explosive industry have been steadily converted into dyes and accumulated against the day when it will be safe for German ships once more to sail the ocean. It is a fair surmise therefore that Germany's stock of dyes must now be sufficient to supply the needs of the whole world for some time to come.

Besides her very natural desire to turn this asset into cash as rapidly as possible after the war is over, Germany can safely be depended upon to resort to her old tactics of slashing prices to stifle competition. She knows that since the commencement of the war dye works have been established in England and the United States, and these she will want to put out of business. The New York representative of one of her biggest dye concerns recently boasted that this was what she intended to do. And England and the United States may as well admit that Germany can make good her prediction unless tariffs are framed against her that will make her dyes expensive, no matter how cheaply she is prepared to sell them.

Statements have been made semi-officially that after the war Great Britain, France and Russia will accord each other's goods preferential tariff treatment. That will be all right as far as it goes, but unless German goods are uniformly subjected to a surtax there is danger that our victory will prove a hollow one from a commercial standpoint.

More Intelligence Needed in Recruiting.

THE announcement that Canada is to raise her army to a strength of 500,000 suggests that the time has arrived for a decided change in her methods of recruiting.

The enlistment of that many men means practically 1 in 4 of our male population between the ages of 18 and 45. If the hit-or-miss principle heretofore adopted is to be continued, Canada will inevitably send to the trenches many a skilled artisan who is sorely needed at home for the maintenance of our economic production, but whose place in the trenches could be just as well filled by an unskilled workman or an office man whose services at home are not so vital.

Our first duty in all things is, of course, to see that we win the war. But there is a right way and a wrong way of doing it. The wrong way is the way we have been doing; the right way is to follow the Derby plan and certificate the eligibles whose work is of a kind that enables them to serve their country just as effectively in the foundry, at the bench, or wherever it is they are employed.

Trading with the Enemy.

A FEW days ago we were shown a card of dome fasteners bearing the legend "Made in Spain." The importer had his suspicions about the genuineness of the description and he wrote his broker in Barcelona for the name and address of the Spanish manufacturer. In due course he was told that the alleged manufacturer did not make the fasteners himself, but bought them in Germany, the German manufacturer very kindly undertaking to supply them with any marking, in any language, that would assist their sale in the market for which they were intended.

Travellers representing a Canadian business house were canvassing the hardware trade last spring trying to take and sometimes actually taking orders for German-made skates, delivery to be made this fall, providing the war were then over and the embargo in German imports lifted!

Instances of this kind almost incline one to sign the German boycott pledge. Societies have been formed in the United Kingdom, in South Africa and in Australia, whose members pledge themselves to abstain from knowingly purchasing or using anything of German manufacture. Lists are now being circulated in Canada having a similar object in view.

Apart from the fact that we ought not to lower ourselves to the level of those who chant the Hymn of Hate, we would all find it exceedingly difficult if not impracticable to get along without some few things of German production. If only Germany would conduct her business on a higher plane of ethics the suggestion of a boycott would probably never take form with us at all. But, of course, if Germany had had a higher ethical sense all along there would have been no war.

It is interesting however to note that meanwhile the Hymn of Hate crowd are not above selling their merchandise for good Canadian money when they can get it.

BAD PACKING AND MARKING OF PACKAGES MEANS LOSS AND DELAY TO SHIPPER

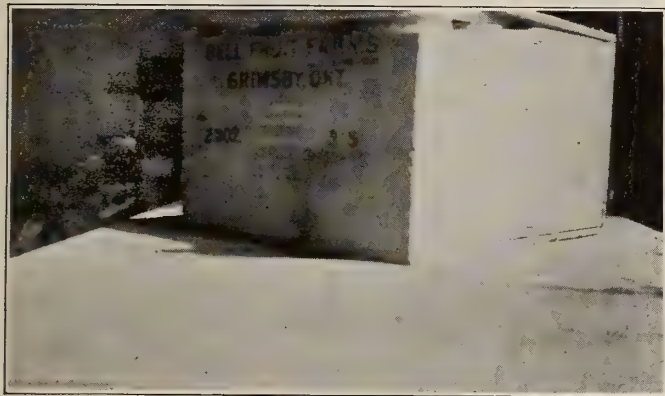
THERE has been published at different times in these columns articles calling the attention of members to the necessity for closer supervision over the packing and marking of goods. "Freight properly packed and correctly marked is already half way to destination," declares a well-known railway official, in a plea to shippers to give greater attention to the preparation of goods for shipment.

One of the most prominent causes of damage to merchandise freight is the inadequacy of packages or contain-

cases 360 were coopered. This was due entirely to the inadequacy of the containers used.

Our report shows that the ends of the cases were made of two pieces of half-inch lumber and not glued or reinforced with cleats or battens; also that half-inch nails were used instead of two-inch, as required by the specifications.

The second report contains information to the effect that the ends and sides of the cases are in two pieces, with no battens or cleats or any reinforcing of any kind; also



Top not Properly Secured with Nails.

ers, either in construction or material, to withstand the several handlings they must receive in the movement to destination. The increasing cost of material for boxing and crating has probably influenced the adoption of less or lighter material, as well as the substitution of containers that only look sufficient at the commencement of their journey. To this must be added the increasing trainloads to meet the demand for faster movement of freight, the extension of trade areas, necessitating longer hauls and more transfers. These all contribute to losses for which the carriers are held accountable.



Who Should Pay the Loss ?

that the nails do not hold at the tops or bottoms of the cases; in fact, the boards fall off, even with very careful handling.

A Serious Crisis in Shipping.

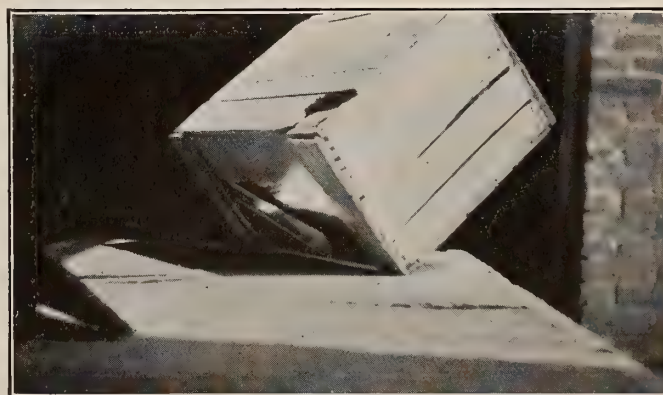
Complaints of this nature have been so numerous that the carriers west of the lakes are giving notice to the steamship lines that such shipments will not be accepted for transportation unless the containers are in good condition. The effect of such notice on shippers will be serious, as it will mean serious delay in transit and consequent loss.



Coopering Defective Cases at Fort William

A Bad Record.

Recently there have been a large number of complaints, particularly in respect to shipments of canned goods from Eastern Canada to Western points via lake and rail, and which have to be handled several times in transit. As an illustration of this, advice has been received that out of shipments of 2,617 cases handled at Fort William during the week of October 28th to November 5th, 539 had to be coopered, or 20.6 per cent. In one car alone, out of 500



Showing Ends under Complaint

Complaints in regard to all-rail shipments are not so frequent, because, as a rule, they are not handled in transit, as is the case when shipped either by water to the head of the lakes or by lake and rail.

The following specifications for containers for canned goods have been recommended:

Wood Boxes of Locked Joint Construction.

Boxes constructed with locked joint corners must have ends in one piece, or if in more than one piece ends must be reinforced with cleats or metal corrugated fasteners and

securely glued at corners; where the ends are in more than one piece and not reinforced, boxes must be securely glued at corners and bound with metal bands or wire completely encircling the box; in all cases boxes weighing fifty (50) pounds or over, tops and bottoms must be fastened with not

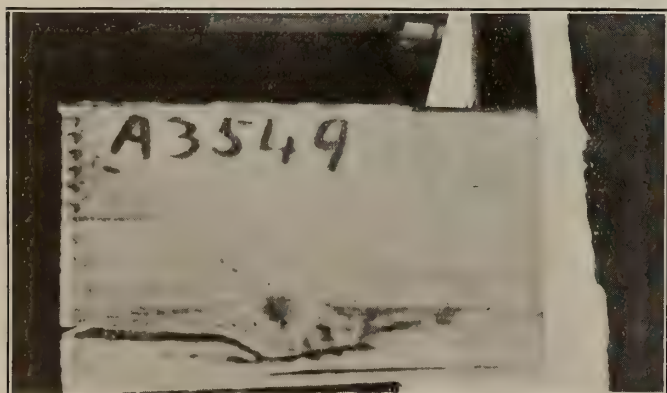


Don't Blame the Carrier

less than twelve (12) nails; boxes containing less than fifty (50) pounds, tops and bottoms must be fastened with not less than ten (10) nails.

Wood Boxes, Nailed.

Boxes that are nailed at corners must have ends in one piece, or if more than one piece ends must be reinforced with cleats or metal corrugated fasteners or constructed with the Linderman dovetail joints securely glued; where the ends are in more than one piece and not reinforced they must be bound with metal bands or wire completely encircling each end of the box; in all cases boxes weighing



How Will the Goods Arrive at Destination

fifty (50) pounds or over, tops and bottoms must be fastened with not less than twelve (12) nails; boxes containing less than fifty (50) pounds, tops and bottoms must be secured with not less than ten (10) nails.

It is suggested that interested members should criticize and offer their objections, if any, thereto. Communications addressed to the Manager of the Transportation Department will receive prompt attention.

Some improvement will have to be made in the method of packing such goods, especially for lake and rail shipment, otherwise shippers will be subjected to serious delay and loss without recourse.

CANADIAN BANK OF COMMERCE HAD PROFITABLE YEAR AND IS IN VERY STRONG POSITION.

The Annual Statement for the Canadian Bank of Commerce for the year ending November 30th reveals this great institution in a very strong position. It is a somewhat exceptional feature of this bank, and one which accounts in no small degree for its well-maintained earning capacity, that at a time when other banks are reporting a greatly reduced demand for commercial accommodation, The Bank of Commerce has succeeded in keeping \$130,893,064 of its funds invested in current loans in Canada up to the present time, a reduction of little over a million from last year and of only five and a half millions from the amount thus employed two years ago, at the height of the country's activity; current loans abroad however have been reduced by eight millions during the two years. Owing to an increased volume of deposits during 1915 the bank is now, notwithstanding this continued attention to commercial requirements, able to show greatly increased liquid reserves, amounting to \$101,173,357 as compared with \$92,983,654 a year ago, and the ratio of these reserves to public liabilities is 45.4 per cent. as compared with 43.1 per cent. in 1914. The bank is particularly strong in actual cash items, its holdings of specie, Dominion notes and instantly cashable paper being \$55,752,032, or 25.2 per cent., of public liabilities, against \$43,354,378 a year ago.

With its funds thus actively employed, there is no cause for surprise that the Bank of Commerce should be able to report profits not very far behind those of the preceding year. Banking profits were \$2,362,036 or 8.25 per cent. on the capital and rest combined against, \$2,668,233 in 1914, or 9.36 per cent. Even after the necessary reduction for the War Tax (\$122,907), and after making the usual contribution to Officers' Pension Fund, these profits leave a very generous margin over the ten per cent. dividend and two per cent. bonus. In order to make the fullest provision for any possible deterioration of securities, the sum of one million dollars has been appropriated as a reserve, which will no doubt meet with general approval.

The 1915 statement, with its indications of a steady increase in the bank's business, a thorough hold upon public confidence, a well-maintained support of Canadian trade and industry, and a solid reserve strength, is an eloquent testimony to the abilities of Sir Edmund Walker, the President, and of Mr. John Aird, who now holds the title as well as the powers of General Manager.

DEATH OF MR. SAXON F. SHENSTONE.

Death came with great suddenness to Mr. Saxon F. Shenstone, Treasurer of the Dominion Radiator Co., on Christmas morning. Mr. Shenstone, who was a son of Mr. Jos. S. Shenstone, of the Massey-Harris Company, had received his early business experience in Hamilton and Chicago. Seven years ago he returned to Toronto to assume the duties of treasurer of the Dominion Radiator Co. with which company he was connected until the time of his death.

THE FOREST PRODUCTS LABORATORIES OF CANADA

CANADIAN industries which look to the forest for their raw material will have reason in the years to come to look upon December 3rd, 1915, as a most important date in their history. On this day the Forest Products Laboratories of Canada, located in Montreal, were formally opened by the Hon. W. J. Roche, Minister of the Interior.

The vast extent of Canada's forest wealth, the great revenue (over \$170,000,000) which is annually derived from it and also the great wastes which have undoubtedly been allowed to occur in years gone by, have all pointed to the great need of such an institution.

In a Government bulletin the purposes of the Laboratories are outlined as follows:—

1. To secure authoritative information on the characteristic mechanical and physical properties of commercial woods and products secured from them.
2. To study and develop the fundamental principles underlying the preservative treatment of wood, and its use for the production of fibre products.
3. To develop practical ways and means of using wood which, under present conditions, is being wasted.
4. To serve as a public bureau of information on the properties and utilization of forest products.
5. To co-operate with consumers of forest products in improving present methods of use.

It is expected that the work which will be carried on at the Laboratories will lead to a better utilization of forest resources along the following lines:—

- 1st. Finding more efficient methods of manufacture of woods.
- 2nd. The elimination of utilization of the wastes of manufacturing and logging.
- 3rd. Finding use for woods not now commercially useful, from a study of their mechanical and physical properties.
- 4th. Finding better use for woods now used to make the lower grade commodities.

5th. Looking for Canadian woods to substitute for imported woods, either in their natural state or after treatment.

6th. Studying and developing the fundamental principles underlying the treatment of wood in its use in the manufacture of fibre products, alcohol, turpentine, resin, tar, etc.

7th. Serving as a public bureau of information on the properties and utilization of forest products.

8th. Co-operating with consumers of forest products, in improving present methods of use and formulating specifications and grading rules for commercial woods, materials secured from them (such as gums, oils, resin, etc.), and materials used in the treatment of wood (creosote, zinc, chloride and other preservatives).

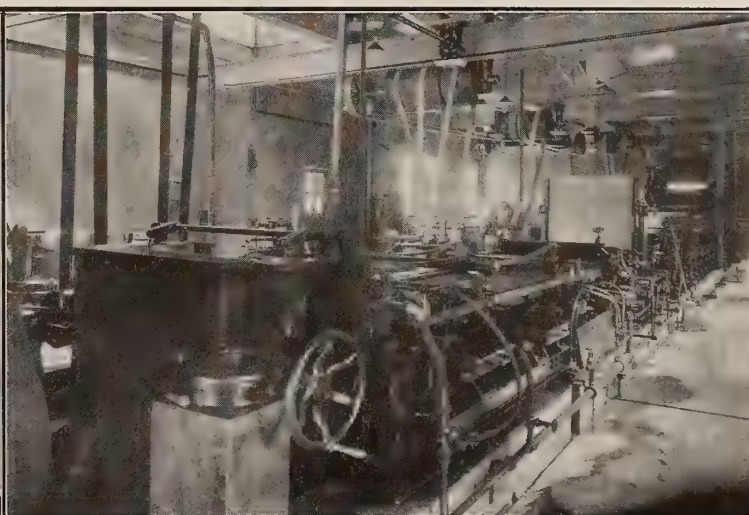
The Laboratories are the result of co-operation between the Forestry Branch of the Department of the Interior and McGill University. The Branch maintains the staff, provides the equipment and takes full responsibility for the work, whilst McGill University provides the buildings, the use of some of its equipment, and last but not least, the kindly assistance of its staff.

The first units of the Laboratories were organized in the latter part of 1913 under Mr. A. G. McIntyre. Upon the resignation of the latter to become manager of the pulp mills of the Bathurst Lumber Company, Bathurst, N.B., Dr. J. S. Bates, one of Canada's most brilliant young Chemical Engineers, was appointed Superintendent.

Two buildings at 700 University Street have been placed at the disposal of the Laboratories for a period of four years, and these have been altered to meet present requirements. The office and laboratory building contains about 20 rooms which are in use as general offices, drafting room, chemical laboratory, photomicrographic room, library, preservation plant, exhibition room, etc. An adjoining building has been reconstructed to contain the equipment of the experimental paper mill. The use of the University Testing Laboratory has been granted for the work in timber tests. A small saw-mill has been fitted up on the outskirts of the



After leaving the beaters the paper stock goes to the storage tanks ("stuff chests") seen to the right and centre, then is pumped through the refining engine ("Jordan") barely discernable above the middle chest, to the riffler (left centre) which catches sand, etc. It then goes to the screen (on the left) whose slotted plates hold back the coarse fibre. The stock is then run on the paper machine.



The experimental paper machine, which is 75 feet long and makes a strip of paper 30 inches wide is the largest and most complete of its kind in the world. It is capable of making practically every class of paper.

city for handling the wood specimens to be tested. A wood working shop and machine shop are also available.

Dr. Bates, Superintendent of the Laboratories, has outlined the work of the institution as follows:

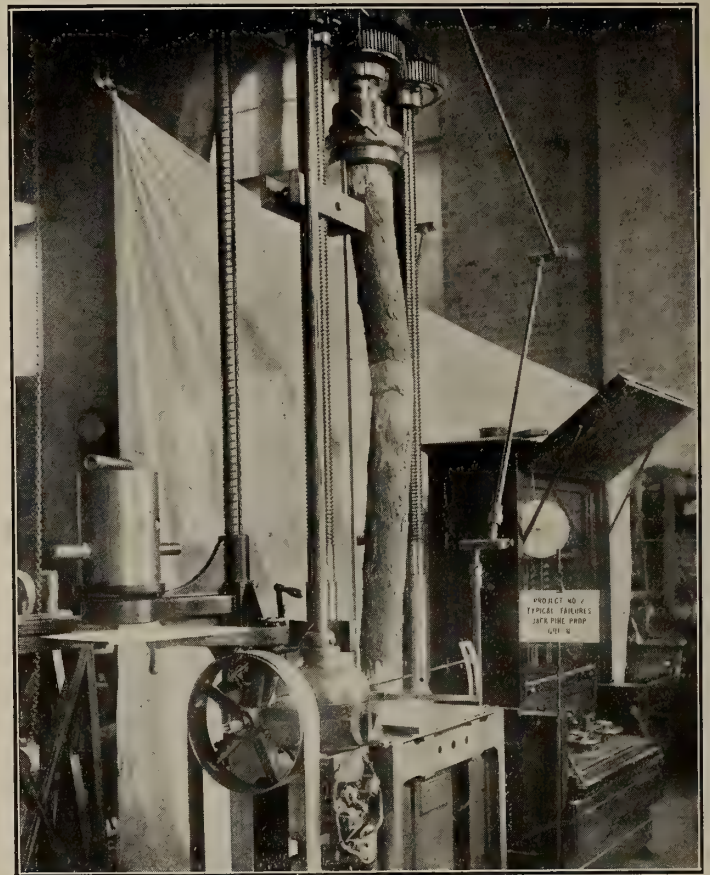
The organization includes the Division of Administration and the technical divisions of Timber Tests, Timber Physics, Pulp and Paper and Wood Preservation.

The division of the Administration is concerned with the general operation of the Laboratories, correspondence, library and so forth. A favorable start has been made in collecting a library containing information on the special which concerns the Laboratories.

The main library of McGill University is consulted for general reference works so that the task of accumulating a special library is very much simplified. A special system has been developed for the collecting and indexing of information, as accurate and comprehensive knowledge is necessary in connection with the library work and the answering of inquiries which are received in large number. Preliminary plans have been made for the collecting and exhibiting of wood specimens, samples of treated wood, pulp and paper, wood distillates and the other numerous products which can be obtained from the raw material furnished by Canadian forests.

One Hatt-Turner Impact testing machine and 30,000 lb. Olsen Universal machine have been installed in the University testing laboratory. The 200,000 lb. Wicksteed and 150,000 lb. Emery machines which form part of the University equipment have also been in frequent use for timber testing. Arrangements have also been made for adjusting the University's 60,000 Riehle testing machine for the laboratories' work. With very little effort and expense on the part of the laboratories there has been made available the most complete and satisfactory testing equipment in Canada.

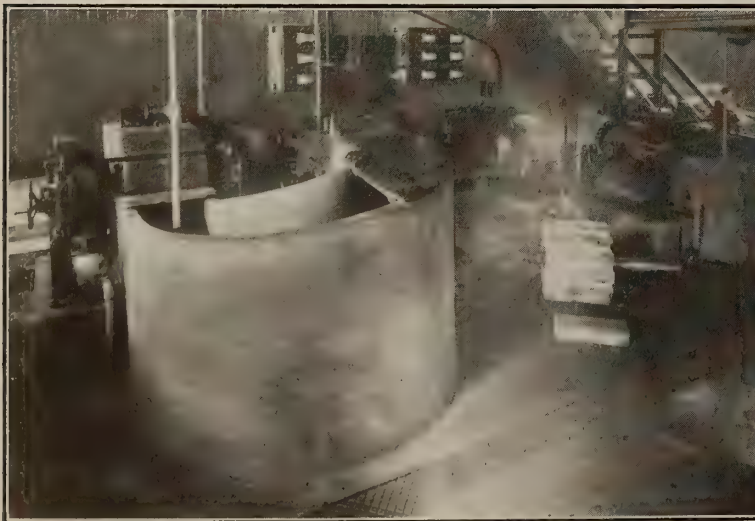
Project No. 1, "Mechanical and Physical Properties of Canadian Woods as Determined by Tests on Small Clear Specimens" was undertaken for the purpose of establishing the strength characteristics of the important Canadian wood species. The testing procedure includes eight strength tests—static bending, compression parallel to grain, compression perpendicular to grain, shear, tension, impact bending, cleavage and hardness. The first species under test is Douglas Fir, obtained from Alberta and British Columbia. The results have shown that the fast growing Douglas Fir



Emery Testing Machine, of 150,000 lbs. capacity, testing a mine prop 7 feet long and 5-16 inches diameter. This prop failed under a load of 66,900 lbs.

of the Pacific Coast has unusual strength and that the slower growing and smaller mountain types, although more affected by knots and other defects are of very good quality. The tests confirm the fact that Canadian Douglas Fir is a first-class structural material.

Project No. 2, "Strength Functions and Physical Properties of Nova Scotia Mine Timbers" has been carried on in connection with a general investigation of Nova Scotia mine timbers instituted by McGill University in co-operation with the Forestry Branch. Over seven hundred representative pit props and booms were obtained from Nova Scotia, including five species—Black Spruce, Balsam Fir, White Birch and Yellow Birch. Most of these timbers



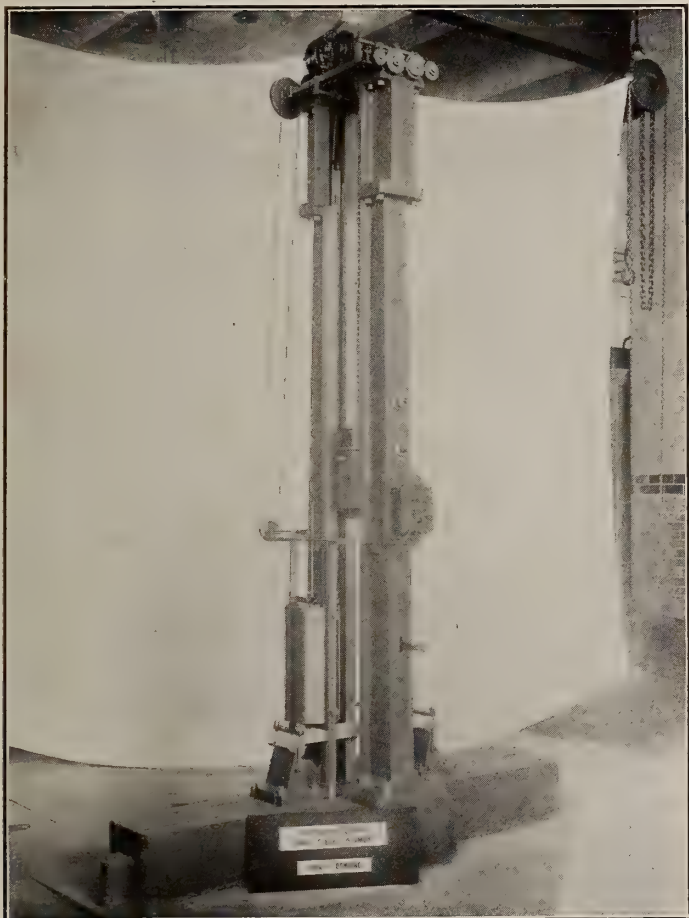
On the left is seen the Marx double beater, on the right the single beater, which are used in paper making to "work up" the stock and strengthen the fibre. The basalt beater roll in the left foreground revolves, brushing the fibres against a bedplate in the bottom of the beater.



Wicksteed Testing Machine of 200,000 lbs. capacity, testing a boom or beam used to support the roof in mining operations. The conditions are similar to actual practice. This 7-inch beam failed under a load of 14,780 lbs.

have been tested in commercial sizes in the large machines. Much valuable information has been obtained from these tests and results will be ready for publication in the near future.

Considerable equipment, including microtome, microscope, photomicrographic apparatus, projection lantern, cameras, electric ovens, autoclave, balances and so forth,



The Hatt-Turner Impact Machine determines the shock-resisting capacities and elastic properties of specimens. The green Douglas Fir stick in the picture, 2 in. by 2 in. by 30 in., failed when the hammer, weighing 51¼ lbs., was dropped from a height of 25 inches.

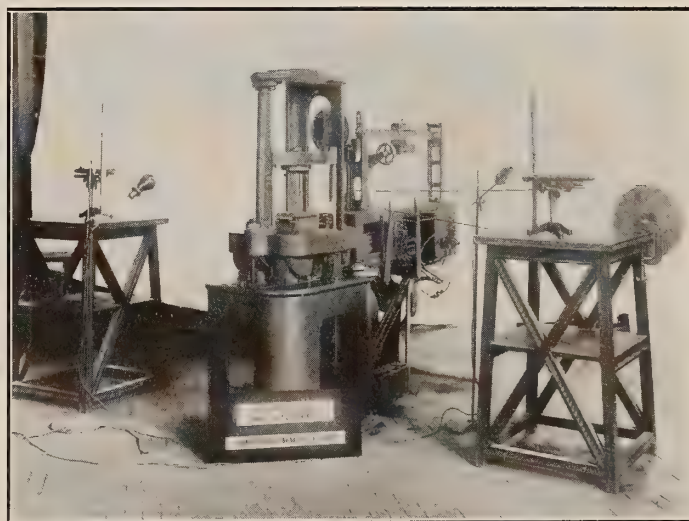
has been obtained for the division. The work has to do largely with the determination of physical and structural properties of wood by the testing of moisture content, specific gravity, per cent. springwood, per cent. summerwood, per cent. sapwood, per cent. heartwood, fibre dimensions, cell structure, microscopic characteristics and fungus infection. There has been considerable study to learn the relation of microscopic structure of wood to penetration by preservatives and other liquids. General botanical studies are also made. All the photographic work is done by this division, including the making of microscopic slides, photomicrographs and lantern slides of wood sections and pulp fibres as well as miscellaneous photographs, copies, enlargements, etc. Studies have been made to improve the methods of wood identification. Investigations are in progress on the relation of vapor pressure and shrinkage to the moisture content of wood.

Special attention has been given to the equipping of a thoroughly modern semi-commercial experimental paper mill and it is safe to say that when all the equipment is in place this mill will be without an equal in any of the centres throughout the world where experimental work of this kind is in progress. A special Fourdrinier paper machine has been installed, the machine being about 75 feet in length and turning out a sheet 30 inches in width. The machine

is flexible in its adjustments and attachments and is designed to make practically all grades of paper. A single beater of 40 lbs. capacity and a double beater of 60 lbs. capacity have been installed with interchangeable basalt lava and steel rolls with individual motor drive to each roll. The remaining equipment includes three stuff chests, riffler, screen, four pumps, five motors, two paper testing instruments, Erfurt sizing system and a variety of small apparatus. Sulphite and soda digesters and other equipment will be installed in the near future for the manufacture of wood pulp by chemical processes on a satisfactory scale. Preliminary work has been done on several pulp and paper investigations. Queen's University has co-operated in research on the chemical composition of waste sulphite liquor, which is produced in such large quantities by paper mills.

A new Division of Wood Preservation was organized in October, 1914. The scope of this division includes the study of wood preservatives and methods of treating wood to prolong the life of railroad ties, paving blocks, telegraph poles, posts, piling, trestle timber, mine props and structural timber in general. A study of wood-destroying fungi has also been undertaken as well as methods of fireproofing wood. A certain amount of equipment in the form of retorts, pumps, motors, air compressor and so forth have been obtained for the carrying on of experimental work. Particular attention is being paid to the subject of railway ties in Canada.

Although it is not feasible to establish more than the four above-mentioned technical divisions at the present time the officials of the Forestry Branch believe that there are a number of other branches of work in the field of forest products which demand attention and which should be taken care of in separate divisions some time in the future. There are decided limitations to the accommodation and facilities for experimental work in the present temporary quarters and provision for new divisions is somewhat uncertain until a new and fully equipped building is secured.



The Olsen Testing Machine, through its delicate adjustments determines the shortening of a specimen under pressure on the ends. The green Douglas Fir specimen in the picture failed under a total load of 24,060 lbs., or a stress of 4,115 lbs. per square inch of area of the end.

A study of the lumber industry with special reference to saw mill operations and waste wood utilization is perhaps the most pressing of these needs. Since lumber is by far the most important of Canadian forest products it is clear that there should be made a special study of this industry from beginning to end. The technical assistance which these laboratories might give to the industry would be

partly in carrying on direct investigations but probably more in suggesting improved methods of operation and utilization of waste.

A Division of Chemistry would provide for experimental work on the recovery and refining of essential oils, turpentine, rosin, tannins, dyes, potash and other products from the leaves, branches, bark, trunk and roots of trees of various species.

Destructive distillation of hard and soft wood has attracted considerable attention in Canada. The hardwood industry now provides large quantities of wood alcohol, acetic acid, acetone and charcoal. It is interesting to note that wood alcohol is now in great demand for the manufacture of formaldehyde to disinfect the trenches and hospitals at the front, while acetone is necessary in large quantities as a solvent for gun cotton in the manufacture of cordite, which is the explosive used in shrapnel and rifle cartridges. An investigation is now in progress to study the possibilities of resinous wood distillation as applied to Western Yellow Pine stumps in British Columbia. The products of this process are turpentine, pine oil, light oils, pine tar oil and charcoal, together with a variety of secondary products. These laboratories have been of assistance in a general way in promoting these industries.

The hydrolysis of wood for the production of sugar from which ethyl alcohol (grain alcohol) can be made and the use of the wood residue as cattle food are discoveries of recent years which give promise of important industrial development in the future. At present the laboratories are unable to do any experimental work along this line.

The investigations made by the laboratories are regulated by an Advisory Committee of seven members who represent a wide range of experience and interest.

The members of the staff are called upon from time to time to give lectures before scientific societies, university students or the general public and a good deal of interest has been stimulated in this way.

The publications contributed to date by the laboratories are Forestry Branch Circular No. 8, "Forest Products Laboratories," Circular No. 9, "Chemical Methods for Utilizing Wood Wastes" and Bulletin No. 49, "Treated Wood Block Paving."

An important function of the laboratories has been that of answering inquiries on forest products. In this way the laboratories have undertaken to act as a bureau of information for the benefit of the public.

RECORD YEAR FOR ROYAL BANK.

The Royal Bank of Canada has just issued its annual report, showing a remarkably good year in earnings and net profits. The past year has been one to try the strength of financial institutions, and it is a source of gratification, not only to the officers and shareholders of the bank, but no less to the Canadian people in general, to see how excellently the Royal Bank has stood the test.

The statement, which is for the fiscal year ending November 30th, 1915, shows net profits of \$1,905,576.57, equivalent to 16.48% on the paid up capital, against \$1,886,142.67 or 16.31% in the previous year, a gain of \$19,433. The profits of the year, added to the balance at the credit of profit and loss at the end of the previous year, brought the total amount available for distribution up to \$2,519,638.82. Out of this amount, in addition to making the regular distribution to shareholders, the bank followed its usual conservative policy in making a large appropriation to the officers' pension fund and writing off a substantial amount on bank premises account. The dividends, at the rate of 12% per annum, required an appropriation of

\$1,387,200; \$100,000 was transferred to officers' pension fund; \$250,000 written off bank premises and \$105,966 paid as war tax on the bank's note circulation, leaving the balance to be carried forward to profit and loss of \$676,472, against \$614,062 last year.

In view of the increased profits for the year the bank's liquid position attracts immediate attention and, on this account, it is satisfactory to find substantial gains in the proportion of both the liquid assets and cash on hand. The liquid assets amount to \$84,894,462, equivalent to 49.33% of the liabilities to the public, compared with \$71,244,677, or 46.06% at the end of last year. Of these liquid assets specie on hand amounted to \$15,946,289, against \$12,995,483; Dominion notes \$12,977,390, against \$12,688,371. This made the percentage of cash to liabilities 18.43% as against 17.90% in the previous year. All accounts in the liquid assets showed gains over the previous year, the notes of other banks standing at \$3,057,650, against \$2,525,205; cheques on other banks \$6,516,759, against \$5,752,485; balances due by banks and banking correspondents elsewhere than in Canada \$5,235,606, against \$3,144,502; Canadian municipal securities as also British, foreign and Colonial public securities, \$3,184,333, against \$2,185,062; railway and other bonds, debentures and stocks, \$14,083,602, against \$13,557,741. The total assets of the bank increased almost \$20,000,000 by touching \$198,299,123, against \$179,404,054.

CHANGE OF FIRM NAME.

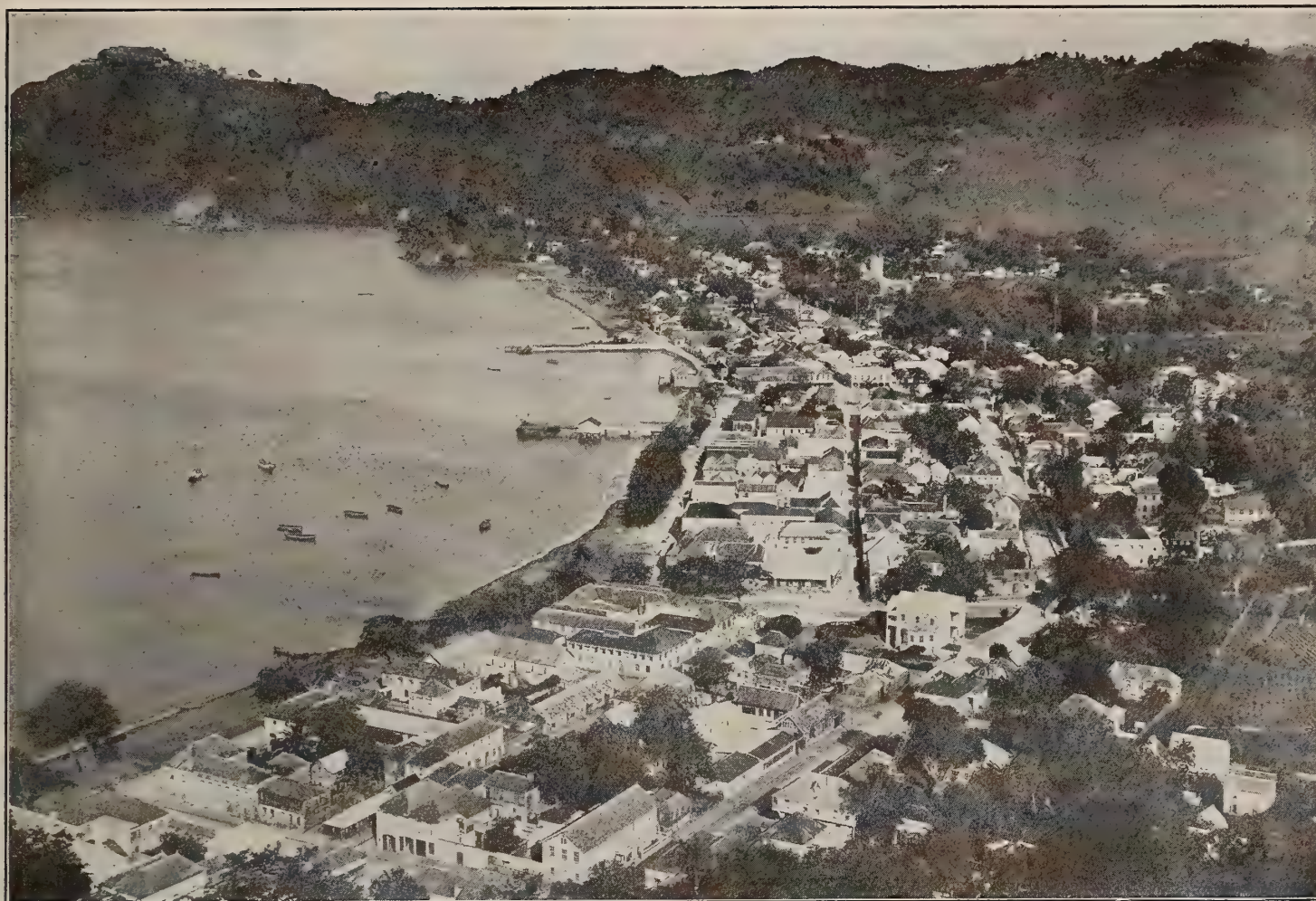
Rowland & Campbell, Ltd., is the new name of the old firm of Rowland & Parkes Ltd., Winnipeg. The company, besides doing a jewelry jobbing business, will manufacture a complete line of gold rings, gold jewelry, and emblem goods. The firm, as it is now constituted, consists of Arthur E. Rowland, president, Shirley A. Campbell, vice-president, and J. C. Greenwood, secretary-treasurer.

CANADIAN FAILURES FOR A MONTH.

Statistics of commercial failures in the Dominion of Canada continue to reflect a smaller business mortality than in 1914, though the record still makes an adverse comparison with other recent preceding years. Thus, insolvencies during November numbered 217 and supplied liabilities of \$4,393,101, against no less than 306 for \$7,093,799 last year, 199 in 1913 for \$1,763,256, and only 99 in 1912, when the indebtedness was \$1,089,044. Separation of last month's statement shows that 55 suspensions for \$1,512,603 occurred in manufacturing lines in comparison with 57 for \$924,403 a year ago, 57 in 1913 for \$739,133, and but 26 in 1912 for \$397,009. Among traders, 155 firms failed, owing \$1,765,098, these figures comparing with the unusual number of 234 similar reverses for \$2,427,497 in November last year, 133 in 1913 for \$997,923, and only 70 in 1912, when the amount involved was \$646,427. The returns for the class embracing agents, brokers, etc., disclosed 7 defaults for \$1,115,400, against 15 for over \$3,700,000 a year ago, 9 for \$26,200 in 1913, and 3 in 1912 for \$45,608.—Dun's Review.

INSTALLING ADDITIONAL EQUIPMENT.

The Steel Company of Canada are installing additional equipment for the manufacture of bow sockets and drop forgings, which will enable them to double their output in these lines.



A West Indies Port—Kingston, Island of St. Vincent

WATSON GRIFFIN DISCUSSES WEST INDIES.

Whatever possibilities exist in the British West Indies for Canadian trade are discussed in a report prepared by Mr. Watson Griffin and just issued by the Department of Trade and Commerce. No feature of the commerce of these islands has been overlooked by the Commissioner. He has visited the different islands and parts, and his suggestions are the result of personal observations.

For years it has been recognized in a general way that the British West Indies constituted a natural outlet for Canadian products. They produced several articles that we consumed, such as sugar, fruits, etc. We on our side were in a position to supply them with manufactured articles that they imported. The essentials for mutual trade were present.

That a greater trade has not developed is the result of many conditions of location, transportation, etc., all of which are discussed by Mr. Griffin. Two outstanding reasons, however, can be followed throughout the whole report as being chiefly instrumental in retarding the development. These are the lack of knowledge of the demands of the islands, and the merchandizing methods that are used in cultivating the market.

We cannot recommend Canadian manufacturers too strongly to get a copy of "Canada and the West Indies" which will be sent free on request. It is well-illustrated, well printed, and contains a complete survey of the field. Not only its discussions of the weaknesses in former efforts to develop the West Indian market, but more especially its suggestions for the overcoming of present disabilities are worthy of the closest attention. Only by a close study of a foreign market can a substantial export trade be established.

INCORPORATE IN CANADA.

Commencing with January first, the National Cash Register Company will operate in Canada as a separate corporation, incorporated here and carrying on its business exclusively from the head office in Toronto. The ownership of the stock will remain as heretofore.

The change which has just become effective is a recognition of the growing importance of the Canadian market. It is felt that a people is developing here which is different from the people of the United States and whose wants and methods of doing business are different. Particular policies may be desirable here which are not practicable in the United States. In a word the National Cash Register Company of Canada will be a national Canadian company.

Mr. Herbert Daly will continue as General Manager for the Canadian company.

DEATH OF MR. T. A. STAUNTON.

The death of Mr. T. A. Staunton, President of Staunton's Limited, manufacturers of wall-paper, occurred in Toronto on Dec. 26th. Mr. Staunton was an old member of the Canadian Manufacturers' Association.

MR. J. K. LINDSAY PASSES AWAY.

In the death of Mr. J. K. Lindsay, in Toronto, on Dec. 26th, Canada lost a manufacturer who had long been identified with commercial life in this country. Mr. Lindsay was connected with a number of shoe manufacturing companies for many years. In recent years he has been identified with the Canadian Consolidated Rubber Co. of Montreal.

NEW MANUFACTURING COMPANIES.

B. C. Molybdenite Co., Ltd., Nelson, B.C.; capital, \$25,000.

Hamilton Aero Mfg. Co., Ltd., Vancouver, B.C.; capital, \$50,000.

The Manchester Iron Works, Ltd., Calgary, Alta.; capital, \$50,000.

Edmonton Cement Co., Ltd.; capital, \$1,500.

Great West Mfg. Co., Ltd., Winnipeg, Man., brooms, whisks, brushes, etc.; capital, \$20,000.

Italian Mosaic & Tile Co., Ltd., Toronto, Ont., tile, terrazzo, mosaic, cement, lime, plaster, etc.; capital, \$40,000.

Ideal Foundry & Hardware Co., Ltd., Toronto, Ont., iron, brass, founders, machinists; capital, \$50,000.

The Canadian Crow Motor Co., Ltd., Mount Brydges, Ont., automobiles and the parts thereof; capital, \$100,000.

The Brandon Shell Co., Ltd., Toronto, Ont., capital, \$100,000.

Windsor Casket Co., Ltd., Windsor, Ont.; capital, \$35,000.

The Alliance Beverage Co. of Toronto, Ltd., Toronto, Ont.; capital, \$40,000.

The Western Sugar Refining Co., Ltd., Petrolia, Ont.; capital, \$600,000.

Sanitary Bedding Co., Ltd., Toronto, Ont.; \$40,000.

D. M. Gilpin & Co., Ltd., Toronto, Ont., iron and steel; capital, \$250,000.

The Bennett & Messecar Co., Ltd., Mille Roches, Ont., physicians' supplies; \$50,000.

Hooton Chocolate Co., Ltd., Toronto, Ont.; capital \$100,000.

Columbus Life Saving Suits, Ltd., Montreal, Que.; capital, \$100,000.

Canadian Brass Bedsteads, Ltd., Montreal, Que.; capital, \$45,000.

Canadian Lockers, Ltd., Toronto, Ont.; capital, \$100,000.

Atlantic Chemicals, Ltd., Toronto, Ont., capital \$50,000.

A. & E. Pierce, Ltd., Montreal, Que., furriers, dressers and dyers of furs; capital, \$100,000.

Reliance Clock Co., Ltd., Montreal, Que.; capital \$500,000.

United Paper Products Co., Ltd., Vancouver, B.C.; capital, \$100,000.

Canadian Electro Products Co., Ltd., Montreal, Que., metals, minerals, metallic products, chemicals, etc.; capital, \$500,000.

G. A. Roy, Limitee, Village of St. Pie, Que., wood, metal, cement, coffins, etc.; capital, \$50,000.

Chemical Refinery, Ltd., St. Catharines, Ont., potash; capital, \$100,000.

International Steel Corporation, Ltd., Toronto, Ont.; capital, \$100,000.

The Montreal Steel & Foundry Co., Ltd., Montreal, Que.; capital, \$150,000.

Perfection Canning, Ltd., Cowansville, Que.; capital, \$50,000.

J. A. Marceau, Limitee, Montreal, Que.; capital, \$50,000.

OUR RETURNED SOLDIERS.

The Work of the Canadian Patriotic Fund and the Soldiers' Commission.

The establishment of the Soldiers' Aid Commission for Ontario, of which the Secretary is Mr. C. N. Cochrane, Parliament Buildings, Toronto, is the first result of the report recently issued by the Hospitals Commission, and the forerunner of others.

The care of the soldier who has returned to Canada, mutilated or weakened as a result of active service, is the

prime duty of Canadians. For some months the Canadian Patriotic Fund has been endeavoring to ensure that the men already back from Europe should suffer no want. This work has been voluntarily undertaken by local committees of the fund, although in most instances their time is fully occupied with the task of making provision for the families of soldiers.

Each soldier is interviewed at Quebec by a representative of the fund and a confidential report sent by the latter to the patriotic committee of the town to which the soldier is going. This serves the two-fold purpose of protecting the fund against the greedy or unscrupulous and of giving the local committee information that is helpful in finding employment for the deserving. Not every man who returns to Canada wearing His Majesty's uniform is included in the latter category, but the great majority have done their duty in the fullest degree. To the latter it has been the privilege of the fund to present a small badge bearing the words, "For Service at the Front." The men who are wearing these badges are the worthiest citizens that we can acknowledge. Like charity, that badge should be allowed to cover a multitude of sins.

The work that the Canadian Patriotic Fund can do for returned soldiers, however, is limited by Act of Parliament, and it has been specifically enacted that no assistance can be given by the fund to "any person who is in receipt of any gratuity, pension or allowance paid by His Majesty or by any foreign government in consequence of incapacity or death occurring as aforesaid." Partly on this account and largely because the pensions and gratuities paid to incapacitated men are oft-times admittedly inadequate, it has been necessary to establish a Hospitals Commission and Disablement Fund. The officials of the latter, in their report to the Federal Government, recommended among other measures, that provincial commissions be formed for the purpose of supplementing these pensions either by monetary grants or by free training in various trades. The Soldiers' Aid Commission of Ontario, as we have said above, is the first step in this direction. Already it has announced its intention of mobilizing the manufacturers of Ontario and we do not doubt that the process will be facilitated by the manufacturers themselves. Others also will be asked to lend their aid in discharging a great national duty and there is every prospect that in Canada at least the traditional tragedy of the returned soldier will have no place.

WILL MAKE POTATO STARCH AND DEXTRINE.

E. G. Beer, formerly of Hercules Boxes, Ltd., is returning to Prince Edward Island to engage in the manufacture of potato starch and dextrine. The manufacture of potato starch has been carried on heretofore in Canada only in a small and unorganized way. It is Mr. Beer's intention to introduce modern methods into the industry and to develop it along the most approved lines. Dextrine, which is a by-product, was formerly imported exclusively from Germany. This represents another new industry for Canada at Germany's expense.

CALENDAR RECEIVED.

A calendar has been received from The Brantford Cordage Co., Limited, Brantford, Ont. Enclosed with it are sent interesting statements of the development of the company's business.

A diary for 1916 has been received from the Canada Paper Co., Limited, Montreal, Toronto, and Windsor Mills.

A TIGHT CHECK ON PIECE WORK

How a Cash Register is Used for Making a Piece-Work System Accurate and Sure

THE following is a description of a Cash Register Controlled system for handling piece-work tickets, for the various operations of assembling a Cash Register in the factory of The National Cash Register Company of Canada, Limited, at No. 350 Christie Street, Toronto, Ont.

The Cash Register used is one of the electrically-operated machines with the Number Device or Levers for printing the

The tickets, or strip, are then torn off and pinned to the order card by a Hotchkiss Stapler, and turned over to the Foreman to be checked for accuracy, each ticket being stamped with his o.k. stamp. The order is then turned over to the Sub-Stock Room, where the necessary stock is gotten out for the first operation.

The order card, Piece-work ticket and stock are taken to the assembler on the first operation, who completes his work, writes his check number on the first ticket and returns the order to the Sub-Stock Room, where the Stockkeeper o.k.'s the first ticket, tears it off the strip and deposits it in a locked box, and then gets out the stock for the second operation.

These tickets are collected by the Department clerk each morning and the assembler's check number and date are entered on a card opposite the operation number, making it easy to tell at any time the progress of the order through the Factory; also making it impossible to put through a ticket twice for the same operation, even if it were possible to have a duplicate ticket made out.

O.K. L.P.	50	0.20	99425
O.K. L.P.	51	0.85	99425
O.K. L.P.	52	1.00	99425
O.K. L.P.	53	1.00	99425
O.K. L.P.	54	0.80	99425
O.K. L.P.	55	1.45	99425
O.K. L.P.	56	0.80	99425
O.K. L.P.	59	0.85	99425



Special Piece Work Attachment on Left

Factory or Order number on the tickets, which are issued in a long strip perforated between each ticket for the various operations.

The sample ticket represents the nine operations which are necessary to assemble a Class 500 Cash Register. The figures at the right, on each ticket, represent the Order number. The figures in red denote the Piece-work price paid for each operation. The figures from 0 to 9 represent the operation number and the figure 5 on the extreme left denotes the Class of machine: in this case being a Class 500.

The register, as shown in the cut, has five banks or rows of keys, the three on the right registering amounts from 1c. to \$9. Those next to the left hand row have figures from 1 to 9 for operation numbers, and the three in the left hand row register the principle or class numbers, 3, 4 or 500; these being the three classes handled by this one machine.

The Levers, indicated on the cut by the arrow, are first set at the proper number, then the keys representing the price paid for the first operation and the Class number (5) are pressed, then the register is operated by pressing the Operation number key. It is then only necessary to register the price paid and the Operation number for each successive operation, to complete the ticket; as the Levers and Class number key remain set until changed for another order.

A BILLION DOLLARS IN GOLD.

The appeal made by the Government to the French people asking, on patriotic grounds, that they surrender their hoarded gold for notes in order to strengthen the Government's financial position, has resulted in raising the gold stock of the Bank of France to \$1,000,000,000. The public turned in \$260,000,000 of gold in less than six months, and the yellow metal is still flowing in rapidly, more than \$12,000,000 having been exchanged for notes the week before last.

O.K. L.P.	57	1.50	99425
O.K. L.P.	58	0.22	99425

Checking the Cost

OCT 29-16				
No.	Inspected	Job	Completed	By Ck. No.
1	OCT. 4	1	SEP 24	27.77
2	OCT 12	2	OCT. 2	10.5
3	OCT 12	3	OCT. 6	99
4	OCT 13	4	OCT. 5	99
5		5	OCT. 8	102
6		6	OCT. 9	82
7		7	OCT 25	73
8		8	OCT 25	73
9		9	OCT 22	68
		E.L.		
		Motor	OCT. 8	3/
		Reel	SEP 29	107
		Type	OCT. 8	70
SUPPLIES				
Upper		Lower		Back
Stores		Circulars		
Delivered to Shipping Dept.		OCT 28		

Piece Work Record from a Cash Register

THOMAS GIBSON JOINS THE ARMY.

Thos. Gibson, President of the Lake Superior Corporation, Secretary of the Spanish River Pulp and Paper Co., and officially connected with several other important Canadian industries, has volunteered for active service and has been given a commission with the Oxford County Overseas Battalion.

APPOINTED FIRE MARSHAL.

Mr. E. P. Heaton has been appointed by the Provincial Government to the new position of Fire Marshal for the Province. The need for a competent Fire Marshal has been felt for years. The alarming fire loss has gone on year after year, making the waste from this cause alone a tremendous burden on industry. No other explanation of the great discrepancy between the fire loss in Canada and in the better organized countries of Europe can be given than that of reckless carelessness.

Among the earliest advocates of the appointment of an official whose work it would be to investigate all fires and fix the responsibility for them, was Mr. Heaton. His long experience in Fire Insurance fits him admirably for the work called for by the new position. The new Fire Marshal has a big work ahead of him.

DEATH OF S. MORLEY WICKETT.

In the sudden and untimely death of Dr. S. Morley Wickett, the Canadian Manufacturers' Association has lost an active and valued member. Dr. Wickett had for several years given liberally of his time in the varied activities of the Association. As a member of the Executive Council and of the Executive Committee of the Toronto Branch he contributed in a large measure to the success of the Association's work.

To Dr. Wickett is largely due the advance in public opinion in favor of industrial or technical education. He made this field his own. In the early years of the campaign he carried on the fight with a persistence and tenacity that eventually compelled consideration. Without his efforts there would have been no Royal Commission in Canada for the investigation of technical education.

Dr. Wickett was a man of public spirit. He was not content to stand aside and inveigh against the inefficiency of public service. On the contrary he made a close study of municipal government and then he offered his services to the people of his city and as alderman of the city of Toronto for several years he did invaluable work in the public interests.

WITHDRAWAL OF RATES VETOED.

The Canadian Pacific and Grand Trunk Pacific Railway Companies recently filed with the Railway Commission notice that they would withdraw the concurrence which they had filed with the Board, the effect of which was to concur in joint tariffs issued by the Canadian Northern Railway Lines west of the Lakes. The Canadian Northern retaliated by revoking its concurrence in joint tariffs issued either by the Canadian Pacific or Grand Trunk Pacific Railways.

The Commission has taken prompt action and disallowed these notices. The Board has made it clear that under the Railway Act joint rates are obligatory, and while all the railways concerned seem at least to agree in an effort to get rid of them, in view of their action, joint rates as contemplated by the Act are intended for the general con-

venience of the public so as to facilitate the movement of freight traffic.

The Chief Commissioner in the judgment has made it clear that the companies cannot be permitted to destroy the system of joint rates established, simply because they so desire.

The decision is an important one to shippers in the West. The withdrawal of these tariffs would probably have meant a very large increase in freight charges as well as great inconvenience to the general public.

It is further stated in the judgment that if the companies desire relief in connection with any particular joint rate now in effect the only possible way they can get that relief is by following the provisions of the Act and so far as the Board is concerned, making out a case justifying the extension of such relief.

It has been made absolutely clear by the Board to these carriers that whatever differences may exist between them shall not be reflected upon the public or allowed to interfere with the movement of traffic as required by the Act.

CANADIAN MANUFACTURERS—SOUTH AFRICA WANTS YOU.

A well-known manufacturer's agent with sample rooms at Cape Town, Durban and Johannesburg, is desirous of fixing up with really first class manufacturers of hardware, groceries and kindred lines: Terms, a contribution towards travelling expenses and commission: Good turn-over for the right firm. Exceptional references, apply in the first instance to M. M. M. "Industrial Canada" Office, Toronto.

CHANGE OF ADDRESS.

The Toronto office of T. Pringle & Son, Limited, factory and mill engineers and architects, has been changed to 601 Excelsior Life Building, corner of Adelaide and Toronto Sts.

PERKINS GLUE COMPANY.

The Perkins Glue Co., Lansdell, Penn., originators and manufacturers of vegetable glue, used extensively in wood-working factories for veneer purposes, have leased a factory in Hamilton. Machinery is being installed under the direction of Mr. J. G. B. Perkins, and operations will commence about the middle of February.

ALLOY FOR HARDENING STEEL.

The refining of molybdenite has been undertaken by the British Columbia Molybdenite Co., Ltd., of Nelson, B.C., who are establishing a new plant there. Molybdenite is a metal which is used as an alloy for hardening steel.

ZINC OXIDE FACTORY.

The Electro-Zinc Co., Ltd., Welland, are establishing a plant for the production of zinc and zinc oxides from concentrates. This is a new industry for Canada.

ZINC REFINING IN B. C.

Another zinc refinery has been established in Canada. Thos. H. French, Fairview, B.C., is preparing a plant which he hopes to have in operation by March 15th.

WORKMEN'S COMPENSATION BOARD MAKES CHANGES IN CLASSIFICATION

Wishes of Employers Met in Number of Cases

THE Workmen's Compensation Board has just announced a number of changes in the classification of the industries in Schedule 1. Many of the changes made are at the request of employers, and were presented through the Safety Associations in the industries concerned. The most important changes are in Classes 8, 10 and 11,—the Metal Trades—and in these Classes the Workmen's Compensation Board has, in great measure, met the wishes of the employers in grouping the industries in four classes. Employers should bear in mind, however, that the grouping of industries in classes does not necessarily mean that all the industries in any particular class will be assessed at the same rate for 1916.

The Regulations presented below have to do with changes in the classification, entirely. The rates for 1916 will not likely be made public by the Board until the 1st of March, when the assessment notices for 1916 will be sent out. Employers will be asked for pay-roll statements about the 1st of February. The changes in the classification, which affect manufacturers, are as follows, the number in each case being the number of the Board's Regulations.

The Workmen's Compensation Board hereby makes the following Regulations respecting The Workmen's Compensation Act:—

65. Rossing and bark peeling are added to Class 1 of Schedule 1.

66. Interior woodwork and cabinet work are withdrawn from Class 3 and "fixtures" is added to Class 3 of Schedule 1.

67. Manufacture of brooms or brushes and carpenter, joiner or cabinet work in shop are added to Class 4 of Schedule 1.

68. Manufacture of abrasives or abrasive articles, other than stone, is added to Class 5 of Schedule 1.

69. Manufacture of paving blocks is withdrawn from Class 6 and manufacture of brick, stone or artificial stone paving blocks or cement or concrete blocks is added to Class 6 of Schedule 1.

70. Classes 8, 10 and 11 as now existing and the industries therein are withdrawn from Schedule 1 and in lieu thereof the following classes and industries are added to Schedule 1:—

Class 8a. Rolling mills; manufacture of heavy forgings, including ship anchors.

Class 8b. Foundries; gas or electric welding; manufacture of stoves, furnaces, cast hot water boilers, radiators, or metal sanitary ware, water fixtures or bedsteads.

Class 8c. Fabrication of structural steel, iron or metal; ship building or ship repairing; manufacture of boilers, engines, locomotives; riveted pipes, tubing or tanks; safes, heavy machinery, cranes; metal siding, ceiling, roofing, shingles, window frames or the like.

Class 10. Machine shops, metal stamping works, or blacksmith shops; manufacture of light forgings, carriage mountings, wires, cables, bolts, nuts, nails, screws, tools, cutlery, hardware; tin, sheet metal or sheet metal enamelled wares or articles not otherwise specified; metal wares, instruments, utensils and articles; wire goods, screens, cold drawn shafting, cold drawn tubing, firearms, ammunition shells (without

explosives), windmills, gas or electric light fixtures, light machinery, scales, cash registers, typewriters, adding machines, dry batteries, cameras, sporting goods, metal toys; buttons of metal, ivory, pearl or horn; ivory articles, rubber stamps, pads or stencils.

Class 11. Manufacture of agricultural implements, threshing machines, waggons, carriages, sleighs, vehicles, automobiles, motor trucks, motor-cycles, bicycles, tricycles, toy waggons or sleighs, baby carriages, or aeroplanes; car shops.

71. Sub-Class A of Class 13 is made Class 13 of Schedule 1, and manufacture of torpedoes, fuses or cartridges is added thereto; the rest of Class 13 is united with Class 14 as Class 14 of Schedule 1; and manufacture of tar, or tarred, pitched or asphalted paper is transferred from Class 14 to Class 16 of Schedule 1.

72. Manufacture of chewing gum is added to Class 22 of Schedule 1.

73. Manufacture of brooms or brushes, tents, awnings and articles not otherwise specified, made from fabrics or cordage, and the erection of awnings by the manufacturer are withdrawn from Class 26 and manufacture of felt hats is added to Class 26 of Schedule 1.

74. Manufacture of felt hats is withdrawn from Class 27, and the manufacture of hats other than felt, quilts, clothing pads, tents, awnings, gloves, mittens, neckties, or other articles not otherwise specified made from fabrics, and the erection of awnings, are added to Class 27 of Schedule 1.

75. Classes 33, 35 and 36 as now existing and the industries therein are withdrawn from Schedule 1 and in lieu thereof the following class and industries are added to Schedule 1:—

Class 33. Bricklaying, mason work, stone setting; plastering; concrete or cement work in or connected with buildings; excavation work for or connected with buildings; structural carpentry; lathing; installation of pipe organs; house wrecking or house moving; painting, decorating or renovating; glazing or installation of plate glass; the business of window cleaning; sheet metal work; roofing; the erection of lightning rods; electric wiring of buildings or installation of lighting fixtures; plumbing, heating or sanitary engineering; gas or steamfitting.

76. Bridge building other than steel is withdrawn from Class 32 of Schedule 1.

77. The industries now in Class 37 of Schedule 1 are withdrawn therefrom and in lieu thereof the following industries are added thereto:—

Class 37. Road or street making or repairing; bridge or culvert construction not otherwise classified; manufacture of asphalt material or paving material not otherwise classified; concrete or cement work not otherwise classified; sewer construction, tunnelling, shaft sinking, well digging; construction or operation of a waterworks system; excavation work for foundations other than for or in connection with buildings; trenching, less than six feet deep, for gas pipes, water pipes or wire conduits; excavation work not otherwise classified where the depth is more than six feet and the width is less than half the depth.

78. Electric wiring of buildings and installation of lighting fixtures are withdrawn from Class 38 of Schedule 1.

79. Classes 41 and 43 as now existing and the industries therein are withdrawn from Schedule 1 and in lieu thereof the following class and industries are added to Schedule 1:—

Class 41. Construction or operation of railways or canals; construction or operation of drydocks; construction of piers, wharves, breakwaters or other harbor improvements; stevedoring; operation of and work upon wharves; dredging, subaqueous construction or pile driving; fishing.

80. Regulations 31 and 55 are repealed, and all the words after "last mentioned industry is included" are struck out of Regulation 52.

81. Regulation 43 is amended by:—

- (1) Striking out the words "subject to any provision elsewhere contained respecting operation of elevators" in the 1st and 2nd lines thereof;
- (2) Striking out paragraph (c);
- (3) Making paragraph (o) read "Excavation other than as expressly mentioned or as included in other industries."
- (4) Adding the following paragraphs:—
 - (t) Operation of theatre stage or moving pictures;
 - (u) Operation of passenger or freight elevators not in industries in Schedule 1 or Schedule 2.

82. Regulation 44 is amended by:—

- (1) Substituting the word "store" for the word "business" in the 3rd line thereof;
- (2) Striking out from paragraph (e) the words "and tinsmith repairing in shop only."

83. Regulation 45 is amended by:—

- (1) Adding at the end of paragraph (c) the words "the six workmen to be computed exclusive of switchboard operators";
- (2) Adding the following paragraphs:
 - (l) Cutting, hewing, piling or hauling logs, wood or bark; logging; bark peeling by hand;
 - (m) The business of window-cleaning.

84. Regulation 46 is amended by:—

- (1) Striking out paragraphs (a), (c), and (e) thereof;
- (2) Making paragraph (d) read "Carrying on of a blacksmith or blacksmith and wood work shop";
- (3) Adding the following paragraph:
 - (k) Work or operations added to Schedule 1 by Regulation 53.

85. Regulation 63 is amended by changing the words "four workmen" to "six workmen" and inserting the word "usually" before "employed."

86. The 20th day of January in each year is hereby prescribed as the date on or before which employers are yearly to prepare and transmit to the Board the statement provided for by section 78 of the Act.

These regulations are not to take effect until 1st January, 1916.

Passed the 8th day of December, 1915.

Approved by the Lieutenant-Governor in Council the 9th day of December, 1915.

The Laboratories have a permanent staff of 30 of whom 7 are on active military service, leaving only 17 technical men at the Laboratories. The balance make up the office staff in the division of administration. The chiefs of the staff are as follows:—

John S. Bates, Ph.D., Superintendent.

W. B. Campbell, Asst. Superintendent (on active service).

H. N. Lee, Acting Chief, Division of Timber Physics.

R. W. Sterns, Chief, Division of Timber Tests.

O. F. Bryant, Acting Chief, Division of Pulp and Paper.

W. G. Mitchell, Chief, Division of Wood Preservation.

The whole organization comes under Mr. R. H. Campbell, Director of Forestry in the Department of the Interior.

LIGHTNING-RODS PREVENT FIRES.

In connection with the general campaign for a reduction of the enormous fire loss in Canada, the following statements, from authorities, giving actual experience with lightning-rod protection, will be appreciated.

Mr. R. R. Cameron, Secretary-Treasurer of the East Williams Mutual Fire Insurance Co., Ailsa Craig, Ont., under date of September 25, 1915, says: "With this company, the principal cause of fire losses is lightning. During the last six years we have paid 54 claims for damage by lightning and only six claims for damage by fire otherwise started. In our case (insuring farm buildings) lightning-rods seem to be the practical remedy."

Mr. W. G. Willoughby, Secretary-Treasurer of the Lambton Mutual Fire Insurance Co., of Watford, Ont., says: "Lightning has been the principal cause of our losses, and if the amount paid on stock were added to the amount paid for losses on buildings by lightning, it would be more than 50%. We have not had a rodded building burned for years, and the damage to them is very small—none in 1914 nor in 1915 so far (September 30, 1915). We make a difference in rates in favor of rodded buildings, and over half are rodded.

Bert B. Buckley, Ohio State Fire Marshal, in his August Bulletin says: "During these three months, lightning is credited with 68 fires, with a resulting loss of \$91,165. In every case the buildings struck were not equipped with lightning-rods. Not a single fire was reported where the building was rodded; in fact, it is very seldom, indeed, that such a case is entered on the records."

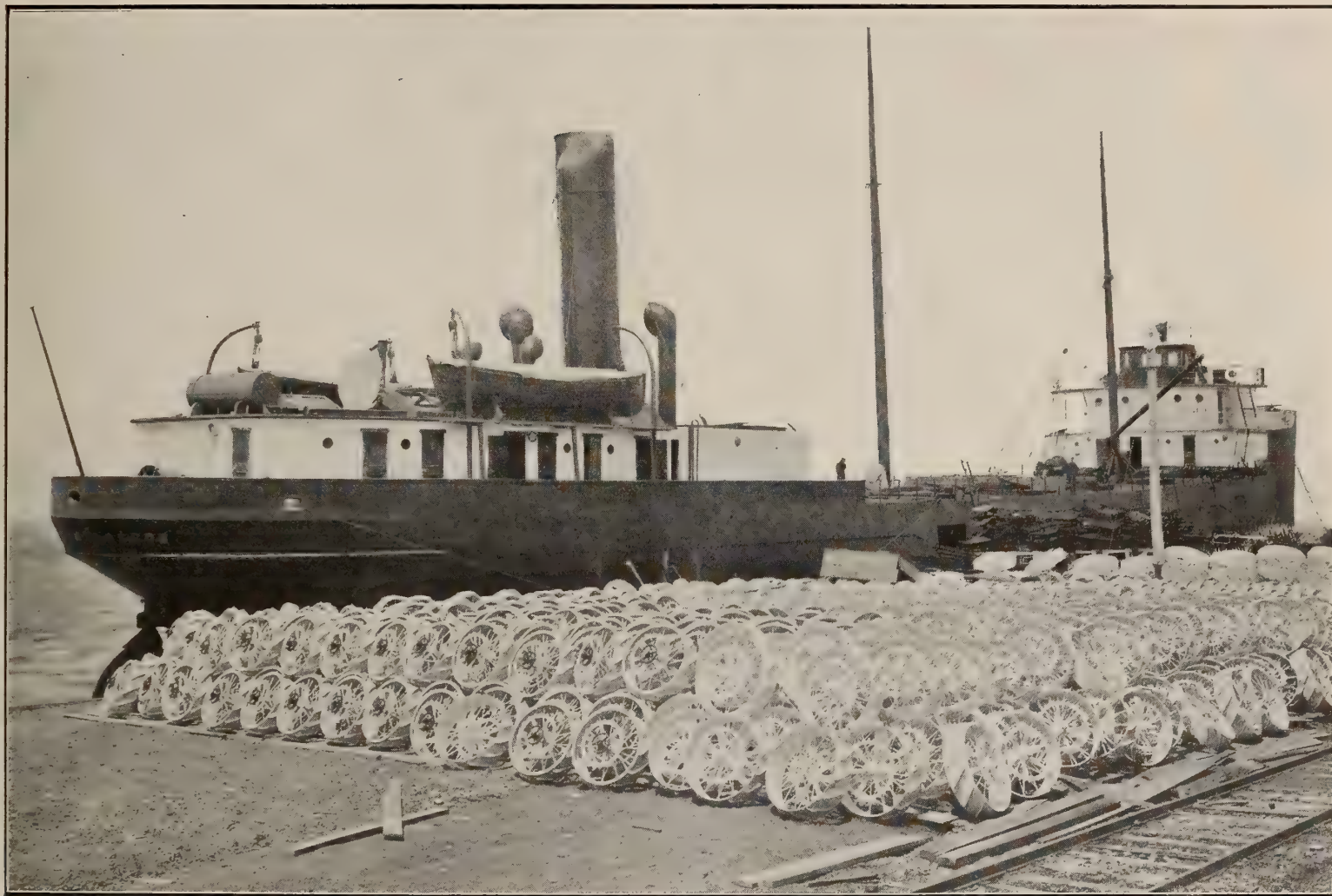
In the face of the foregoing evidence, and in view of the small cost of installing lightning-rod equipment, it would seem advisable for farmers to equip their property with this protection, and also to the advantage of insurance companies to give a preference in premium rates to risks so protected.—Insurance & Financial Review.

WILL MAKE PUMPS.

The American Well Works Co., of Aurora, Ill., are establishing a branch at Chatham, Ont., having purchased the factory formerly occupied by the Defiance Engine Co. They intend to add to the buildings and equipment of this concern at once, and will begin operations at an early date. They will start with a force of about 60 men and will manufacture various lines of pumps, making a specialty of deep well pumps. Their sales agents are R. H. Buchanan and Co., of Montreal; Gorman, Clancey and Grindley, Limited, Edmonton and Calgary; and the British Columbia Equipment Co., of Vancouver.

CHANGE OF ADDRESS.

The Chicago Bridge & Iron Works, whose Canadian plant is at Bridgeburg, Ont., have changed their general sales office in Chicago from Washington Heights to 37 West Van Buren St. (Old Colony Bldg.), and have combined with it their city sales office, formerly at 332 South Michigan Ave.



How the Manufacturers of Eastern Canada find their Way to the West. A Scene at the Fort William Terminus of the Grand Trunk Pacific



Supplying the West with Coal in Return for its Wheat

I N S U R A N C E

GERMANIA WITHDRAWS FROM CANADA.

THE business of the Germania Fire Insurance Company has been reinsured by the Western Assurance Company of Toronto. The Germania for the present will cease writing business in the Canadian field. The title of the company has evidently not proved very attractive in Canada.

NOVEMBER FIRE LOSSES.

According to estimates compiled by the "Monetary Times," the fire loss throughout Canada during the month of November amounted to \$922,980 as compared with \$1,258,325 for October and \$1,524,932 for November of last year. This brings the total Canadian fire loss for the first eleven months of the year to \$11,718,172. Twelve lives were lost by fire during November, bringing the total for the year to 129.

MORE STATE INSURANCE.

On January 1st next Pennsylvania will be added to the list of states having a workmen's compensation law, and another State Insurance Fund will be created. The first announcement made by the managers of the fund is to the effect that the rates charged by the fund will be ten per cent. below those of the companies. Inasmuch as the computation of the rates to be charged in Pennsylvania has not yet been completed, it does not appear that the state is preparing to handle the subject in a very scientific manner. The establishment of the State Fund is intended to compete against the companies instead of eliminating them, and the managers are already claiming that they alone can completely protect the employer, a statement which is vigorously disputed by the companies. For a period of three and one-half years the expenses of the fund will be defrayed by the State, a condition which is not only unfair to the insurance companies but which calls for vigorous objection on behalf of the taxpayers.

RESPECTIVE VALUES OF SPRINKLER SUPPLIES.

The National Fire Protection Association have compiled data with the object of ascertaining the respective merits of various types of sprinkler equipment, dealing principally with the question of supply. The figures include the results of 5,782 fires which occurred in premises protected by automatic sprinklers and the following conclusions are arrived at:

1. The pressure tank has the best record for prevention of large loss fires; number of heads opening and unsatisfactory fires. It has the highest percentage of no claim fires.

2. The automatic pump may be said to represent the other extreme from the pressure tank. The number of unsatisfactory and large loss fires is greatest in equipments depending on automatic pumps.

3. Equipments having pressures of under fifteen pounds show a decidedly higher percentage of large loss and unsatisfactory fires. The showing improves slightly with an

increase of pressure but there is no marked superiority between pressures of over twenty-five pounds and those under.

4. The dry system has a much higher average number of heads opening than the wet system and also a much poorer showing in respect to large loss and unsatisfactory fires.

KANSAS FIRE MARSHALL ON GASOLINE.

Most housewives would be frightened into hysterics if they saw one of their children playing with a loaded shotgun. Yet some of those same women will thoughtlessly undertake dry cleaning in the kitchen with gasoline. Using a bowl or pan of gasoline in the kitchen is about as harmless a pastime as playing football with a can of nitroglycerine.

A firm which manufactures a compound used with gasoline for dry cleaning is advertising its product extensively in this country under such headlines as "Housewives save \$5 by Using Gasoline?" "A Good Way to Collect Your Life Insurance" would have been a more appropriate heading.

Gasoline is a high explosive, more powerful and easier set off than dynamite. Thousands of people have been burned to death or blown into bits by handling it carelessly. Gasoline evaporates very rapidly, and a small dish full of gasoline will fill an ordinary kitchen full of a highly explosive gas in a few minutes. A match, a spark, a fire burning in the kitchen range or a gas light is all that is needed to complete the combination. A wrecked house and a funeral are the usual result.

With all possible precaution taken, dry cleaning with gasoline is a very dangerous process. If a housewife feels that she must do her own dry cleaning she should be very careful to follow these instructions:

1. Get your gasoline in a tightly closed red can.
 2. Do the whole job out of doors at some distance from the house.
 3. Take your pan out of doors before you put the gasoline in it.
 4. Be sure that the gasoline is thoroughly dried out of the articles cleaned before you bring them into the house.
 5. Be sure that all traces of gasoline are removed from your hands and your clothing before you enter the house again.
 6. Never leave gloves on the hands to dry after cleaning.
 7. Allow no one to light a match anywhere near where you are working or where your clothes are drying.
 8. Allow no one who is smoking to come anywhere near you or the clothes you have been cleaning until all traces of gasoline have disappeared.
 9. Make sure that everything has been removed from the pockets of garments to be cleaned before putting them into the gasoline. A match head in a pocket may do untold damage.
 10. Always remember that you are fooling with something that is as dangerous as nitroglycerine or dynamite.
- Kansas Fire Marshal.

QUEBEC BANK BUILDS UP FINE SHOWING OF LIQUID ASSETS.

The general statement of the Quebec Bank for the year ending October 30, which has just been presented at the annual meeting, exhibits a condition of noteworthy strength. The bank's business has expanded materially during the year, the funds entrusted to it by the public being now just over 17 million dollars, and just about a million more than last year. But the liquid assets held against these liabilities have increased by a million and a half, and now amount to over 9 million dollars, or 52.9 per cent. of liabilities, against seven and a half million, or 47.1 per cent., in 1914. That the assets have been thoroughly tested out and include nothing that is not of sound banking quality is evidenced by the very large provision that has been made for "contingencies," \$337,000 having been written off for that object, mainly by drawing upon the Rest Fund. A gratifying point is the large proportion of the liquid assets which is carried in actual cash; there is almost two million in specie and Dominion notes (nearly twice the usual showing), and another million in the promptly convertible items of notes and cheques of other banks.

While the bank performs a notable public service, and at the same time conserves its own position, by keeping thus strong in the present difficult times, such a policy can only be pursued at a certain sacrifice of profits. The Quebec Bank has this year adopted the practice generally followed by other banks, of deducting business taxes before showing profits instead of exhibiting them in the profit-and-loss account. This year's profit of \$233,420 therefore compare with \$275,762 in 1914, or a decrease of 15.35 per cent., which is very moderate in the circumstances.

The above mentioned provision for contingencies cannot be regarded as part of the year's business at all, and is therefore rightly provided for by drawing \$308,750 from the Rest Account, which now stands at a round million dollars. This transfer obviously involves a considerable sacrifice on the part of the shareholders, but it affords to the clients of the bank a most gratifying evidence of the management's courage and conservatism, qualities which are both essential for successful banking in times like the present. The reduction of \$850,000 in current loans (a large part of which may be accounted for by the writing off for "contingencies") is proportionate to the times, and represents rather the result of lessened activity in trade circles than of any pressure on clients.

Altogether the 1915 statement reflects very great credit upon President John T. Ross and General Manager B. B. Stevenson for their policy during the most trying year in Canadian banking history.

WHAT WE MAKE IN CANADA.

While Canada is producing all kinds of war munitions, these do not account for all her increased industrial activity. Foreign trade was seriously disturbed by the war and many articles which were previously imported could not be had; and, consequently, manufacturers turned their attention to the possibility of substituting Canadian-made articles for those which had been bought abroad. Among these articles which are now being made in Canada are the following: High carbon steel, manganese steel; molybdenum; zinc; steel drums; pyrometers; detachable chain and chain belting; drawn tungsten wire; accumulators; milking machines; wire weaving machinery; sand blasts; automatic wrapping machinery; aluminum lasts; toys of metal and wood; wire tag fasteners; wire collar supports;

light metal wares, such as clips and buttons; fancy pencil movements; lamp lenses; window glass; glass syphon vases; potash; cyanides; ether; amyl acetate; reclaimed rubber; oxygen and hydrogen; acid resisting varnish; medical specifics; tonic wine; grape juice; bakers' and confectioners' malt supplies; parchemintine and glassine paper; hollow turned wood boxes.

Another field in which Canadian manufacturers have made progress is in increasing the production of goods used mainly for regular industrial purposes which have been manufactured in Canada for some years. The following outputs have been increased either by the establishment of new companies or the greater activities of old companies: Pulp and paper; leather; sugar; chains; wood-ware; tungsten lamps; enameled ware; wood distillation products; abrasives; electro metals; carbon electrodes; carbide; ice and refrigerating machinery; augers and bits; casters; drapery hardware; office supplies; paste and toilet preparations.

AN INTERNATIONAL EXHIBITION IN LONDON.

Manufacturers who are interested in an export trade should investigate the opportunities offered by the London Fair and Market, which will run from March 14th to 24th in London, Eng. An announcement of this Exhibition appears in the advertising pages of this issue.

The importance of the Exhibition is established by the fact that the Federation of the Foreign Office Chambers of Commerce in the United Kingdom, of which the constituent chambers are France, Italy, the Netherlands, Spain, Portugal, Sweden, Belgium, etc., has appointed representatives to serve on an Honorary Advisory Committee, especially with a view to influencing merchants and buyers in their respective countries to visit the Market.

The London Fair and Market is under the management of the International Trade Exhibitions Ltd., Broad Street House, London, E.C. It will be held in the Royal Agricultural Hall, the Olympia, and such additional buildings as become necessary.

Further information may be had at the "Industrial Canada" office.

EXTENSION OF ALUMINUM BUSINESS.

The Northern Aluminum Co., Toronto, are installing machinery for rolling aluminum sheets. This is the first mill of the kind in Canada. Foundations for the rolling mills are now completed and the machinery is on order. In addition to the machines for rolling the aluminum, annealing ovens will also be installed. This branch of the work will be done as a development of the Toronto factory.

At Shawinigan work is progressing on the new mills for rolling aluminum rods, by the same company. The equipment in the latter place will also be the first of its kind in Canada and represents a valuable addition to the country's industrial activities.

BUSINESS IS RUSHING.

The Toronto Furniture Company is among the busy factories at the present time. Although, like most other companies, following the commencement of the war, it saw orders falling off and its working force diminishing, it is now operating twenty hours a day, with the biggest staff of workmen it has ever employed.

HOW BEST TO PREVENT ACCIDENTS.

By Victor T. Noonan, Director of Safety, Industrial Commission of Ohio.

All safety engineers are agreed that the best method of preventing industrial accidents is by education. From carefully compiled statistics we know that mechanical safeguards are responsible only for a reduction in accidents from 25 per cent. to 40 per cent. The educational method, on the other hand proves that accidents can be reduced from 60 per cent. to 75 per cent.; in other words, this means that two-thirds of all accident reduction is due to educational methods. This is a very important fact that every manufacturer and employer should remember if he wishes to reduce the number of his accidents. While it costs considerable money to equip machinery with mechanical safeguards, it costs next to nothing to prevent accidents by means of education.

The educational method may be divided into three important phases: Organization, Inspection and Co-operation. First, the entire plant—executive officials, superintendents, foremen and workmen should be organized in the general campaign against accidents in the plant. There should be a general committee of safety and sanitation composed of executive officials and department heads. The purpose of this committee should be to study the causes of accidents and find means of prevention. This committee should also formulate rules for the factory and devise plans for interesting and educating the workmen in accident prevention.

Under the General Safety Committee there should also be sub-committees of workmen in the various departments; these sub-committees may be appointed for three months, six months or a year. Each sub-committee should have an experienced foreman or workman to act as chairman. The sub-committee should make frequent inspections of the various departments and take note of all dangerous conditions, unguarded machinery, poor lighting, inadequate sanitation and other peculiar hazards. The reports of the sub-committees should be sent promptly to the general safety committee.

In connection with the whole safety organization in the plant, where possible, one man should be appointed as safety inspector, whose duty it should also be to act as secretary of the general safety committee. The duty of this inspector should be to keep the minutes of all safety meetings and reports of inspections. He should also devote his time to the general work of the safety campaign. Above all, the safety inspector should be a man who thoroughly understands workmen, who is sympathetic and broad-gauged, because his chief task will first of all be to win the co-operation of the workmen.

When the department heads and employes are well organized, then the real work of preventing accidents begins by means of educational methods. This is best done by frequent talks to the foremen and workmen. At these talks the executive officials should make it their duty to be present because the obligation of preventing accidents is binding not only on the workmen, but it is binding also on the employer, the superintendent and foreman as well. No one man in any industrial organization, whether he be president or gate-keeper of the plant can excuse himself from giving his personal co-operation day in and day out to the work of preventing needless accidents. I repeat here that talks to workmen on the subject of safety are about the most important, if not the best means of arousing enthusiasm and co-operation among men. These talks may be given by invited speakers, or they may be given from time to time by department heads and superintendents.

It is a very good plan also to allow the men to discuss the accidents and offer suggestions to prevent same.

The work of educating the workmen against accidents can also be carried on by means of bulletin boards placed in each department. These bulletin boards should contain photographs, stories of the causes of accidents, newspaper clippings regarding accidents, and the names of foremen, workmen or departments that are doing good-work in the cause of safety. Where the plant employs a sufficient number, a monthly bulletin is also a good means of keeping up the personal interest of the employes in the campaign against accidents. The workmen should also be given an opportunity from time to time of sending in their own suggestions on accident prevention. Prizes for the best suggestions also help to stimulate the interest of the workmen. Attractive safety signs, some of which may be illuminated, either in the departments or in the yards, are also helpful.

Safety work has a wide economic basis. It benefits not only the workman, but the employer as well; therefore, it should play the most important part in the daily routine of every plant and workshop. As I have stated above, the obligation rests not only on the shoulders of the workman, but that obligation must be shared by the employer himself; in other words, the man at the top, whether he be the President or General Manager, must set the example. He must show his superintendents, his foremen and his workmen that he himself is personally interested in the work of preventing accidents. Where the employer sets a good safety example, there you will find all the employes co-operating.

"Safety First," not "Production First" should be the watchword in every factory, plant and workshop in this state.

Let the workmen cause delay to the machinery, let them have a breakdown in the machinery, but never let them feel, under any circumstances, that they are permitted at any time to take chances with their lives or their limbs.

WILL BUILD SAILING VESSELS.

At a meeting of manufacturers held in Vancouver, Dec. 22nd, 1915, the question of the shortage of ships for carrying lumber was fully discussed. The condition was one that demanded immediate action. Information was supplied by leaders in the lumbering and shipping industries.

It was decided to form a company immediately for the purpose of building a number of sailing vessels to be operated solely in the British Columbia lumber trade. Steamships will also be purchased if they are available.

Capital to cover the initial expenses was subscribed at the meeting and a strong committee was appointed to carry on the work of organization and construction.

An effort will probably be made to get some Provincial Government support for the enterprise, by the guarantee of bonds.

The proposal for the formation of a company and the building of boats has met with strong support. Indications are that there will be ample capital subscribed.

PARTIAL SERVICES OFFERED.

A successful advertising manager offers his co-operation and counsel in his spare time to a reputable firm desirous of increasing its profits. This presents an unusual opportunity to enlist the services of a recognized specialist in sales promoting and advertising work.—Box 25.

TARIFF

By J. R. K. BRISTOL

SOARING REVENUES FROM FEDERAL TAXES—GREATEST REVENUE IN HISTORY OF CANADA.

THE Finance Minister's forecast of the revenue which his war taxes would produce, seems to be in course of fulfilment. The total Federal revenue for the month of November, 1915, far surpasses the revenue in any corresponding month in the life of this country. A comparison of the total revenue for the months of October and November, respectively, in each of the years 1911, 1912, 1913, 1914 and 1915, shows the following results:—

	1911	1912	1913	1914	1915
October	\$12,221,653	\$14,758,946	\$14,225,598	\$10,641,254	\$14,440,333
November	11,595,670*	14,297,778	13,536,981	9,495,536	17,072,456

BOARD OF CUSTOMS DECISIONS.

"Cyclopedia of Law and Procedure" declared to be dutiable under tariff item 171 when the property of individuals. Under item 171 the British preferential tariff is 5 per cent. and the general tariff rate 10 per cent. ad valorem.

Duty on leghorn and panama hoods, per samples (imported by Harvard Hat Company, Toronto) which have to be sized, bleached, blocked, filled and buffed after importation, not regarded as "unfinished," but declared to be dutiable under tariff item 711, in effect from 1st November, 1915. Under item 711 the duty payable under the British preferential tariff is 15 per cent., and under the general tariff 17½ per cent. ad valorem.

Literature published by American Council of International Conciliation and not for sale may be entered under tariff item 174. Under tariff item 174 free entry is permitted.

CUSTOMS DEPARTMENTAL RULINGS.

Small *paper packages* containing tea, which have to be destroyed to get at contents, entitled to entry as usual coverings when containing tea entitled to free entry. If tea is subject to duty, such packages would be dutiable at same rate as tea unless the value was separately stated on invoice, in which case dutiable at 20 per cent. general tariff, under tariff item 710 (b).

Referring to Appraisers' Bulletin No. 736½, the following articles are considered not entitled to entry under tariff item 696: soil augers, soil sample cans, sample carrying outfits, pruning shears, germinating boxes, pruning saws, pruning knives, grafting chisels, surveyors' chains and similar articles. As item 696 is a free item it will be observed that the foregoing articles are excluded from the privilege of free entry.

White cotton embroideries cut to shape and without neck bands thereon, per samples, to be used to form collars for ladies' garments, dutiable under item 526. By the provisions of item 526 the duty payable under the British preferential tariff is 12½ per cent. and under the general tariff 20 per cent. ad valorem.

Thermographs; dutiable under item 657. By the provisions of item 657 the duty payable under the British Preferential tariff is 17½ per cent., and under the general tariff 25 per cent. ad valorem.

Foster Pressure Regulators; if substantially iron or steel, dutiable under item 453. By the provisions of item 453 the duty payable is 15 per cent. under preferential tariff and under the general tariff 27½ per cent. ad valorem.

Westinghouse Air Springs (automobile shock absorbers) dutiable under item 454. By the provisions of item 454 the

duty payable is 20 per cent. preferential tariff and under the general tariff 30 per cent. ad valorem.

Lubricating Oil, Brushes, Oil Cans and screw drivers, when imported along with cream separators, to be used in the operation thereof, dutiable at the same rate as if imported separately.

NOTE.—The above items, numbered 711, 526, 657, 453, 454, are also subject to the war tariff of 5 per cent. British preferential and 7½ per cent. general tariff.

WAR MEASURES—PROHIBITED EXPORTS.

His Royal Highness the Governor-General in Council, under and in virtue of the provisions of sections 242 and 291 of The Customs Act, is pleased to order as follows:—

Scrap Steel and Scrap Wrought Iron.

(b) The exportation of the following goods is hereby prohibited to all destinations abroad other than the United Kingdom, British Possessions and Protectorates, viz.: "Scrap Steel and Scrap Wrought Iron."

Oatmeal and Rolled Oats.

(e) The exportation of the following goods is hereby prohibited to all foreign ports in Europe and on the Mediterranean and Black Seas, other than those of France, Russia (except Baltic ports), Italy, Belgium, Spain and Portugal, viz.: "Oatmeal, Rolled Oats."

Hay.

(e) The exportation of the following goods is hereby prohibited to all destinations abroad other than the United Kingdom, British Possessions and Protectorates, France, Italy, Japan and Russia (except Baltic ports), viz.: "Hay."

EXPORTS OF CANADIAN PRODUCTS TO DEMERARA, BRITISH GUIANA.

Special Customs Certificates Required on Bills of Lading in Connection With Invoices.

In regard to the above the Commissioner of Customs, Ottawa, Canada, has issued the following notice for the information of Canadian business men:—

"Referring to the matter of Certificates of Origin to be supplied for Canadian products shipped through the United States,

for British Guiana, the Comptroller of Customs at Georgetown, Demerara, has given notice to the following effect:—

(1) I shall require a copy of the Railway Bill of Lading duly certified by the Customs authorities at the place of shipment in Canada in support of Certificates of Origin for goods for which preferential treatment is claimed. I have also to point out that the Certificates of Origin and Railway Bills of Lading must agree in detail as to marks, names of consignees and place of shipment in Canada.

(2) I would also call attention to the fact that reconsignment of Canadian goods from the United States is not permitted under the regulation.

(3) Naturally goods shipped to this country direct from a Canadian port need only be accompanied by a certificate of origin signed by the shipper or his authorized agent.

The form of the Certificate of Origin above referred to is as follows:—

CERTIFICATE OF ORIGIN.

Certificate of Origin for entry under the Canada-West Indies Preferential Tariff, of articles consigned direct from the country of origin or manufacture.

I, hereby certify that I am (1) of the Exporter (s) of the articles included in this certificate, and that I am duly authorized to make and sign this certificate on behalf of the said exporter (s).

I have the means of knowing, and I do hereby certify, that the merchandise designated below is of (2) growth, produce or manufacture, which merchandise is to be shipped to (3) consigned to merchant at (4)

And I further certify that I have the means of knowing that in the case of manufactured goods a substantial portion of the labour of (5) has entered into the production of every manufactured article included in this certificate of origin, to the extent in each article of not less than one-fourth of the value of every such article in its present condition.

Name and address of Exporter.....

Port of Shipment.....

Marks	Numbers	Number
and description of packages and description of goods.	Quantity	Value.

So certified under my responsibility.

Signature.

Dated at this day of 191 .

(This certificate ceases to be valid after six months from date of issue.)

Customs Collectors in Canada are requested to have this form of Certificate shown to shippers of products destined for Demerara.

Customs Officers are also instructed to certify on the Bills of Lading that the products are of Canadian origin when satisfied that the articles are the "growth, produce or manufacture of Canada."

AUSTRALIAN TRADE DESCRIPTIONS ACT RE FOOD PRODUCTS.

Mr. D. H. Ross, Canadian Trade Commissioner, Melbourne, Australia, reports to the Department of Trade and Commerce, Ottawa, that the regulations under the Commerce (Trade Descriptions) Act of Australia in relation to imported food products, are strictly enforced before the goods are released from the Customs.

The trade description is required to conform with the following provisions:

"(a) It shall be in the form of a principal label or brand affixed in a prominent position and in as permanent a manner as practicable to the goods, or where affixture to the goods is impracticable, to the coverings containing the goods; and

(b) It shall contain in prominent and legible characters a true description of the goods, and the name of the country or place in which the goods were made or produced; and

(c) In cases where any weight or quantity is set out, it shall specify whether the weight or quantity so set out is gross or net.

(d) In the case of articles used as food or drink by man, or used in the preparation of articles used as food or drink by man, and containing any deleterious or preservative substance, the trade description shall include a statement setting forth that the articles contain the deleterious or preservative substance, and in the case of preservative substances, the amount thereof per pint or pound weight of the goods."

SPAIN ADMITS WHEAT FREE OF DUTY.

Owing to a shortage in the wheat supply the Spanish Government has authorized by Royal Decree the free admission of 200,000 metric tons of wheat, such shipments to be exempt from transportation tax as well as import duty.

Furthermore the Government is to advance funds to Spanish millers for the purchase of the above quantity of wheat.

DUMPING AS VIEWED BY UNITED STATES DEPARTMENT OF COMMERCE.

The forthcoming Annual Report of Secretary Redfield, of the Department of Commerce, Washington, makes the following suggestion for legislation to prevent so-called dumping of surplus foreign products in United States markets:—

"'Unfair competition' is forbidden by law in domestic trade, and the Federal Trade Commission exists to determine the facts and take steps to abate the evil wherever found. The door, however, is still open to 'unfair competition' from abroad which may seriously affect American industries for the worse. It is not normal competition of which I speak, but abnormal. It is a destructive type of the industrial struggle, intended to put out of being the forces opposed to it that the victor may exploit the field at will. The methods used are not those of legitimate commerce, but those of commercial offense. They aim not at development, but at conquest. When the war shall close, the public control of railroads in foreign lands, the semi-official chambers of commerce, the publicly fostered organizations which control great industries in some countries, will all exist and will all be used in an effort to recover lost commerce. The growth in the United States of industries which may menace large foreign markets heretofore controlled from abroad will not be permitted if public and semi-public forces acting together in foreign countries can prevent it. The outreach of American industries, nay, their very existence in our own land in



THE CANADIAN BANK OF COMMERCE

Statement of the Result of the Business of the Bank for the Year Ending 30th November, 1915

Balance at credit of Profit and Loss Account, brought forward from last year.....	\$1,117,763 27
Net profits for the year ending 30th November, after providing for all bad and doubtful debts	2,352,035 95
	<u>\$3,469,799 22</u>

This has been appropriated as follows:

Dividends Nos. 112, 113, 114 and 115 at ten per cent. per annum.....	\$1,500,000 00
Bonus of one per cent. payable 1st June ...	150,000 00
Bonus of one per cent. payable 1st December	150,000 00
Reserved against further depreciation in value of securities held by the Bank.....	1,000,000 00
War tax on bank-note circulation to 30th November.....	122,906 97
Transferred to Pension Fund (annual contribution)	80,000 00
Subscription to British Red Cross Society..	5,000 00
Balance carried forward.....	461,892 25
	<u>\$3,469,799 22</u>

GENERAL STATEMENT

30th November, 1915

LIABILITIES

TO THE PUBLIC:

Notes of the Bank in circulation.....	\$16,397,907 68
Deposits not bearing interest....	\$52,964,795 51
Deposits bearing interest, including interest accrued to date....	141,558,283 05

Balances due to other Banks in Canada.....	194,523,078 56
Balances due to Banks and Banking Correspondents elsewhere than in Canada.....	751,376 67
Bills payable	6,300,029 77
Acceptances under Letters of Credit.....	1,501,442 90
	<u>1,458,398 64</u>

\$220,932,234 22

TO THE SHAREHOLDERS:

Dividends unpaid	2,713 55
Dividend No. 115 and bonus payable 1st December	525,000 00
Capital paid up.....	\$15,000,000 00
Reserve Account	13,500,000 00
Balance of profits as per Profit and Loss Account	461,892 25

28,961,892 25

\$250,421,840 02

ASSETS

Current Coin	\$18,363,031 97
Dominion Notes	21,538,961 50
	<u>\$39,901,993 47</u>
Notes of other Banks.....	\$1,676,137 00
Cheques on other Banks.....	7,854,036 29
Balances due by other Banks in Canada.....	58 19
Balances due by Banks and Banking Correspondents elsewhere than in Canada.....	6,319,807 98

\$15,850,039 46

Dominion and Provincial Government Securities, not exceeding market value	1,923,576 27
British, Foreign and Colonial Public Securities and Canadian Municipal Securities.....	1,719,258 60
Railway and other Bonds, Debentures and Stocks, not exceeding market value.....	9,613,178 80
Call and Short Loans (not exceeding 30 days) in Canada on Bonds, Debentures and Stocks..	12,847,521 37
Call and Short Loans (not exceeding 30 days) elsewhere than in Canada.....	18,534,329 37
Deposit with Minister of Finance for the purposes of the Circulation Fund.....	783,460 60

\$101,173,357 94

Other Current Loans and Discounts in Canada (less rebate of interest).....	130,893,064 62
Other Current Loans and Discounts elsewhere than in Canada (less rebate of interest)....	10,027,802 39
Liabilities of Customers under Letters of Credit, as per contra	1,458,398 64
Overdue Debts (estimated loss provided for)...	508,515 56

Real Estate other than Bank Premises (including the unsold balance of former premises of the Eastern Townships Bank)...	\$1,264,083 21
Less mortgage assumed.....	100,000 00

1,164,083 21

Mortgages on Real Estate sold by the Bank....	389,534 21
Bank Premises at cost less amounts written off	\$5,039,623 55
Less mortgage assumed on property purchased	300,000 00

4,739,623 55

Other Assets not included in the foregoing.....	67,459 90
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\$250,421,840 02

B. E. WALKER,
President

JOHN AIRD,
General Manager.

Report of the Auditors to the Shareholders of The Canadian Bank of Commerce

In accordance with the provisions of subsections 19 and 20 of Section 56 of the Bank Act, 1913, we report as follows:

We have audited the above Balance Sheet and compared it with the books and vouchers at Head Office and with the certified returns from the branches. We have obtained all the information and explanations that we have required, and are of the opinion that the transactions of the Bank which have come under our notice have been within the powers of the Bank.

We have checked the cash and verified the securities, representing the investments of the Bank at its chief office and principal branches at a date other than, and in addition to, the verification at 30th November, 1915, and found that they were

in agreement with the entries in the books of the Bank relating thereto.

In our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Bank according to the best of our information and the explanations given to us, and as shown by the books of the Bank.

T. HARRY WEBB, C.A.,
of Webb, Read, Hegan, Callingham & Co.,
JAMES MARWICK, C.A.,
of Marwick, Mitchell, Peat & Co.

Auditors.

"some cases, will be resisted to the full and every stratagem of industrial war will be exerted against them. Expecting this, we must prepare for it. If it shall pass beyond fair competition and exert or seek to exert a monopolistic power over any part of our commerce we ought to prevent it.

"So few would question the duty of restraining by means of the public power the unfair foreign competition of which I speak that the question may be said not to be whether we shall prevent such attacks but how they shall be prevented while welcoming, indeed promoting, that normal ebb and flow of legitimate commerce between our land and all others which will provide for our people the security against exactation which is insured by reasonable competition. In my judgment the matter is one which may more wisely be treated as an attempted wrong to be forbidden than as an economic matter which needs to be restrained. I should prefer, therefore, to deal with it by a method other than tariffs, classing it rather as an offense similar to the unfair domestic competition we now forbid. It seems possible that by using the existing machinery of the Treasury Department and the Department of Justice we may restrain this foreign 'unfair competition' on both sides of the sea. I recommend, therefore, that such legislation be enacted as will give to the foreign representatives of the above-named departments such added powers and increased personnel as they may need for this purpose and that it be enacted, if possible, that merchandise sold in 'unfair competition' or under circumstances which tend to create a monopoly in behalf of the foreign producer in American markets shall be forfeited.

"I also recommend that legislation supplemental to the

"Clayton anti-trust act be enacted which shall make it unlawful to sell or purchase articles of foreign origin or manufacture where the prices to be paid are materially below the current rates for such articles in the country of production or from which shipment is made, in case such prices substantially lessen competition on the part of the American producers or tend to create a monopoly in American markets in favor of the foreign producer, and that it be made unlawful for any person to buy, sell, or contract for the sale of articles of foreign origin, or to fix a price for same or to make a rebate upon such price, conditioned upon the purchaser thereof not using or dealing in ware produced or sold by the competitors of the manufacturer or seller, where the effect is to substantially lessen competition in the production in the United States of such articles, or tends to create a monopoly in the sale of such articles in American markets in favor of a foreign producer."

It will be observed that Secretary Redfield does not favor an attack on the dumping problem in the direct manner adopted by Canada. He appears to favor a measure on the lines of the Australian law, which can scarcely be said to have been invoked often enough to be out of the experimental stage. This Australian provision regards dumping as a form of unfair competition which must be investigated by the courts; involving delay, and very considerable expense; and, in respect to any appeal it appears a decision must depend upon the development of facts almost impossible to ascertain by anyone who would be interested in lodging such an appeal. The difficulties to be encountered in enforcing such a law must furnish constant incentive to lax enforcement.

FOREIGN TRADE COMPARISON, 1913-14-15.

	MONTH OF NOVEMBER.					
	—1913—		—1914—		—1915—	
Exports—	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
The Mine	\$5,364,563	\$57,534	\$3,655,475	\$28,858	\$6,634,887	\$22,697
The Fisheries	2,225,333	4,728	2,056,055	14,794	2,075,877	32,911
The Forest	4,107,090	31,643	3,439,970	122,487	4,556,502	28,045
Animals and their produce.....	7,795,511	114,659	8,470,602	814,967	12,113,520	88,334
Agriculture	33,417,055	519,434	18,846,286	1,708,361	53,936,837	64,430
Manufactures	4,841,922	466,151	6,376,500	599,798	13,231,022	1,122,758
Miscellaneous	10,854	122,917	27,221	80,887	383,271	145,002
Total Exports	\$57,762,328	\$1,317,066	\$42,872,109	\$3,370,152	\$92,931,916	\$1,504,177
Imports of dutiable goods.....			1913	1914	1915	
Imports of free goods.....			\$32,338,858	\$18,697,737	\$26,079,686	
Total.....			17,863,298	12,854,453	19,137,873	
			\$50,202,156	\$31,552,190	\$45,217,559	
Imports of coin and bullion.....			\$1,814,404	\$48,328,727	\$4,705,933	
Exports of coin and bullion.....			363,429	332,121	9,865,896	
Customs duties collected.....			8,346,778	5,113,062	9,440,315	

FOREIGN TRADE FOR EIGHT MONTHS ENDING NOVEMBER.

	—1913—		—1914—		—1915—	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Exports—						
The Mine	\$39,440,172	\$168,157	\$35,169,285	\$186,034	\$43,401,193	\$7,057,407
The Fisheries	13,556,463	51,702	11,980,770	92,777	14,036,566	77,516
The Forest	33,194,796	553,209	32,357,299	476,590	38,631,846	381,325
Animals and their produce.....	38,824,803	991,288	50,135,045	1,966,388	69,128,895	1,863,580
Agriculture	142,338,227	8,187,480	94,319,512	34,283,470	153,117,173	17,074,751
Manufactures	35,879,368	7,893,231	45,425,224	5,090,279	97,588,572	5,079,051
Miscellaneous	78,153	2,469,010	242,295	2,890,875	3,458,401	1,018,964
Total	\$303,311,982	\$20,314,077	\$269,629,430	\$44,986,413	\$419,362,646	\$32,552,594
Imports of dutiable goods.....			1913	1914	1915	
Imports of free goods.....			\$294,635,668	\$198,343,559	\$173,144,587	
Total.....			146,111,265	120,010,448	125,088,015	
			\$440,746,933	\$318,354,007	\$298,232,602	
Imports of coin and bullion.....			\$5,422,548	\$129,557,137	\$10,472,715	
Exports of coin and bullion.....			7,829,181	4,099,869	103,049,697	
Customs duties collected.....			76,108,761	53,628,018	62,063,179	

FORTY-SIXTH ANNUAL STATEMENT OF

The Royal Bank of Canada

GENERAL STATEMENT
30th NOVEMBER, 1915

LIABILITIES.

TO THE PUBLIC:

Deposits not bearing interest.....	\$37,456,997.10	
Deposits bearing interest, including interest accrued to date of statement	117,519,330.87	\$154,976,327.97
Notes of the Bank in Circulation.....		14,224,866.29
Balances due to other Banks in Canada.....	\$381,748.82	
Balances due to Banks and Banking Correspondents in the United Kingdom and foreign countries.....	3,137,093.46	
Bills Payable		3,518,842.28
Acceptances under Letters of Credit.....		323,073.76
		105,817.29
		<u>\$173,148,927.59</u>

TO THE SHAREHOLDERS:

Capital Stock Paid in.....		11,560,000.00
Reserve Fund	\$12,560,000.00	
Balance of Profits carried forward.....	676,472.16	13,236,472.16
Dividend No. 113 (at 12 per cent. per annum), payable December 1st, 1915.....	\$346,800.00	
Dividends Unclaimed	6,923.64	353,723.64
		<u>\$198,299,123.39</u>

ASSETS.

Current Coin	\$15,946,289.65	
Dominion Notes	12,977,390.75	
		\$28,923,680.40
Deposit in the Central Gold Reserves.....	3,000,000.00	
Deposit with the Minister for the purposes of the Circulation Fund	578,000.00	
Notes of other Banks	3,057,650.64	
Cheques on other Banks.....	6,516,759.06	
Balances due by other Banks in Canada.....	1,264.21	
Balances due by Banks and Banking Correspondents elsewhere than in Canada	5,235,606.58	
Dominion and Provincial Government Securities, not exceeding market value	1,361,105.95	
Canadian Municipal Securities and British and Foreign and Colonial Public Securities other than Canadian, not exceeding market value.....	3,184,333.53	
Railway and other Bonds, Debentures and Stocks, not exceeding market value	14,083,602.09	
Call Loans in Canada, on Bonds, Debentures and Stocks.....	9,136,509.96	
Call and Short (not exceeding thirty days) Loans elsewhere than in Canada	9,815,950.01	84,894,462.43
Other Current Loans and Discounts in Canada (less rebate of interest)	\$82,004,872.15	
Other Current Loans and Discounts elsewhere than in Canada (less rebate of interest)....	24,547,762.77	
Overdue Debts (estimated loss provided for).....	517,865.05	
		107,070,499.97
Real Estate other than Bank Premises.....		1,026,233.46
Bank Premises, at not more than cost, less amounts written off		5,077,835.61
Liabilities of Customers under Letters of Credit, as per contra		105,817.29
Other Assets not included in the foregoing.....		124,274.63
		<u>\$198,299,123.39</u>

H. S. HOLT,
President.

EDSON L. PEASE,
General Manager.

AUDITORS' CERTIFICATE.

WE REPORT TO THE SHAREHOLDERS OF THE ROYAL BANK OF CANADA:
That in our opinion the transactions of the Bank which have come under our notice have been within the powers of the Bank.

That we have checked the cash and verified the securities of the Bank at the Chief Office at 30th November, 1915, as well as at another time, as required by Section 56 of the Bank Act, and that we found they agreed with the entries in the books in regard thereto. We also during the year checked the cash and verified the securities at the principal branches.

That the above Balance Sheet has been compared by us with the books at the Chief Office and with the certified returns from the Branches, and in our opinion is properly drawn up so as to exhibit a true and correct view of the state of the Bank's affairs according to the best of our information and the explanations given to us and as shown by the books of the Bank.

That we have obtained all the information and explanations required by us.

JAMES MARWICK, C.A.,
S. ROGER MITCHELL, C.A., } Auditors.
Of Marwick, Mitchell, Peat & Co.

Montreal, Canada, December 18th, 1915.

PROFIT AND LOSS ACCOUNT.

Balance of Profit and Loss Account, 30th November, 1914.....	\$614,062.25	
Profits for the year, after deducting charges of management and all other expenses, accrued interest on deposits, full provision for all bad and doubtful debts and rebate of interest on unmatured bills	1,905,576.57	\$2,519,638.82
		<u>\$2,519,638.82</u>
APPROPRIATED AS FOLLOWS:		
Dividends Nos. 110, 111, 112 and 113, at 12 per cent. per annum.....	\$1,387,200.00	
Transferred to Officers' Pension Fund.....	100,000.00	
Written off Bank Premises Account.....	250,000.00	
War Tax on Bank Note Circulation.....	105,966.66	
Balance of Profit and Loss carried forward.....	676,472.16	\$2,519,638.82

H. S. HOLT,
President.
Montreal, 18th December, 1915.

EDSON L. PEASE,
General Manager.

TRANSPORTATION

WHAT IT COSTS FOR RAILWAY SERVICE IN VARIOUS COUNTRIES.

THE Bureau of Railway Economics has recently compiled data for the United States and thirty-eight foreign countries, covering six hundred and six thousand miles of line, which bring out the following outstanding features:

India, on account of cost of labor, handles freight cheaper than any other country in the world. United States comes second. On the other hand, wages of employees in the United States are higher than in any other country, except Western Australia, in which country average receipts per ton are almost twice as great as in the United States. The other countries which approximate the United States in the average annual wage are Australia, New Zealand, and Canada.

Our Capitalization is Low.

The comparison indicates that in capitalization per mile of its railways the United States is exceeded by every one of the principal countries of the world. Our statistics show that the capitalization in Canada is slightly lower, being \$63,079 per mile, as against \$63,535. The list is headed by the United Kingdom, with a capitalization of \$277,147. Belgium comes next, with \$216,143. Russia has an average of \$149,814, France \$148,436, Switzerland \$122,010, Austria \$121,327, Germany \$116,365.

Perform Service for Low Charge.

No country in the world performs the service to the public so cheaply as the United States. In regard to freight traffic, in average receipts per ton mile the railways of the United States receive about sixty per cent. of the average receipts in the principal European countries. The rate in the United States is lower than that of any other country, except India. Several countries receive from two or three or even four times as much for hauling a ton of freight one mile as the railways of the United States. The only country which has substantially the same rate is Canada. The average receipt per ton mile in the United States is .744c, in Canada .757c., New South Wales 1.611c., South Australia 1.756c., France 1.181c., Germany 1.244c., India .703c.

In freight revenue per mile of line the average for the United States is \$7,962, Canada \$5,539.

Density of Traffic.

The density of traffic in some of the European countries is very great, as indicated by the following figures:

Freight revenue per mile of line in Belgium is \$14,440, Germany \$13,898, United Kingdom \$13,295, Austria \$11,237, yet in freight density, ton mile per mile of line, the United States is exceeded only by Germany. In illustration of this, for the year which the comparison covers, the freight, ton miles per mile of line, was 1,078,580, in Germany 1,117,376, in Canada 731,776, in Russia 1,033,254. A comparison of the freight revenue per mile of line with the ton miles per mile of line clearly indicates the higher rates charged in European countries as compared with Canada and the United States. The comparison also shows that Canada, in freight density, is only exceeded by the United States, Germany, Russia and Austria.

It should be noted here that the above comparison is not altogether a fair one, in that the average haul in European countries is much less than on the North American continent, and, therefore, the rates in the former countries must necessarily be higher on account of the terminal expenses. As an illustration, the average haul per ton on the individual railway in the United States in 1912 was 145.44 miles. In Canada the average haul in 1913 was 216 miles. Compared with these the average in the United Kingdom is 36 miles. The average haul in Canada is fifty-five per cent. greater than in the United States.

Comparison of Passenger Receipts.

With regard to passenger receipts, the average receipt per passenger mile in the United States is 1.987c., in Canada 1.943c. These are much higher than in European countries. This is due to the fact that practically all passenger traffic in Canada and the United States is first class, whereas in European countries a large portion of the traffic is second, third or even fourth class. The average receipts per passenger of our railways are considerably greater than those on the railways of the principal European countries, for the reason that the average haul is much longer, and because the traffic is substantially all first class.

It is interesting to note that the average number of passengers per train is greater in Canada than in the United States, being 62, compared with 53.

The comparison of the average yearly compensation per employee shows that Canada stands fourth. The highest wages are paid in Western Australia, the average yearly compensation being \$770.52; United States comes next with \$729.64, New Zealand \$632.16, Victoria (Australia) \$608.52 and Canada \$604.47.

The comparison of operating revenues and expenses per mile of line indicates that the latter are slightly higher in Canada than in the United States. In number of tons of freight hauled per train, United States leads every other country. The average number of tons per train in 1912 was 406.8. Next in order is Canada, with an average of 325.3. German trains carried an average of 240.3 tons and Mexican trains 224 tons. In all other countries the average train load was less than 200 tons.

FREIGHT AUDIT COMPANIES.

THE Freight Audit Company, Its Use and Abuse" is the title of an article which appeared in the "Traffic News" and was reproduced in the April number of "Industrial Canada." In view of the fact that there has been a recent active canvass of members of the Association to employ some of the audit companies who have established themselves either in Canada or border United States cities, it is considered well to produce, in part at least, the article referred to:

"Like the horde of locusts that pounced upon the green fields of ancient Egypt, is the multitude of freight audit companies springing up throughout the country. They are pouncing upon the hapless shipper and creating almost as much devastation as did the locusts in ancient times. We do not

THE QUEBEC BANK

ANNUAL STATEMENT, 1915

Statement of the Result of the Business of the Bank for the Year Ended 30th of October, 1915

PROFIT AND LOSS ACCOUNT.

Balance brought forward from 31st October, 1914	\$11,448 22	
Profits for the year after deducting expenses of management, interest due and paid to depositors, and rebate of interest on unmatured bills	233,120 37	
Premium on new Stock	95 00	
Transferred from Rest Account...	308,750 00	\$553,713 59

Appropriated as follows:

Dividends Nos. 203-204-205-206 at 7 per cent. per annum	191,429 00	
Dominion Government War Tax on Circulation	13,394 11	
Premium on new Stock transferred to Rest Account	95 00	
Provision for Contingencies	337,000 00	
Balance at credit carried forward..	11,795 48	\$553,713 59

REST.

By Balance at Credit 31st October, 1914	\$1,308,655 00	
Premium on new Capital Stock ..	95 00	\$1,308,750 00
Transferred to Profit and Loss account ..	308,750 00	

To Balance carried forward 30th October, 1915	\$1,000,000 00	
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J. PEREGRINE JONES,
Chief Accountant.

B. B. STEVENSON,
General Manager.

JOHN T. ROSS,
President.

GENERAL STATEMENT—30th October, 1915.

LIABILITIES.

Notes of the Bank in Circulation.....	\$2,209,808 00	
Deposits not bearing interest	\$2,888,156 47	
Deposits bearing interest, including interest accrued to 30th October, 1915	11,518,757 18	14,406,913 65
Balances due to other Banks in Canada	253,373 16	
Balances due to Banks and Banking Correspondents elsewhere than in Canada.....	20,406 56	
Acceptances under Letters of Credit.....	1,736 66	
Liabilities not included in the foregoing.....	197,187 42	
Total Liabilities to the Public.....	\$17,089,425 45	
Capital Stock paid in	2,735,000 00	
Rest ..	\$1,000,000 00	
Balance of Profits carried forward ..	11,795 48	
Dividend No. 206 payable 1st December, 1915	447,862 50	1,059,657 98

\$20,884,083 43

ASSETS.

Current Coin	\$359,906 50	
Dominion Notes	1,576,724 00	
Notes of other Banks	174,137 00	
Cheques on other Banks	827,920 37	
Balances due by Banks and Banking Correspondents elsewhere than in Canada	659,739 23	
Dominion and Provincial Government Securities, not exceeding market value	95,590 00	
Canadian Municipal Securities and British, Foreign and Colonial Public Securities, other than Canadian	434,193 88	
Railway and other Bonds, Debentures and Stocks, not exceeding market value	1,776,772 94	
Call and Short (not exceeding thirty days) Loans in Canada, on Bonds, Debentures and Stocks..	3,140,029 88	9,045,013 80
Other Current Loans and Discounts in Canada (less rebate of interest)	\$9,744,030 08	
Liabilities of Customers under Letters of Credit as per Contra Real Estate, other than Bank Premises.....	1,736 66	53,550 00
Overdue Debts, estimated loss provided for	149,310 57	
Bank Premises	1,615,701 18	
Deposit with the Minister for the purpose of the Circulation Fund ..	102,000 00	
Mortgage on Real Estate sold by the Bank	11,340 00	
Other Assets not included in the foregoing	161,401 14	11,839,069 63
		\$20,884,083 43

J. PEREGRINE JONES,
Chief Accountant.
B. B. STEVENSON,
General Manager.

JOHN T. ROSS,
President.

To the President and Shareholders of the Quebec Bank:

We beg to report that we have examined the above Statement and have verified the items shown thereon from the Books of Account, records, and certified Branch returns of the Bank.

The cash on hand, the investments and the securities of the Bank at the Head Office have been verified as required by the Bank Act. We also visited a number of the important Branches of the Bank during the year and have verified the cash and securities held by them.

All information required has been given us during our examination, and all transactions coming under our notice have been within the powers of the Bank.

We certify that the above statement correctly sets forth the position of the Bank at the close of its fiscal year according to the Books of Account, documents, and records examined by us.

Respectfully submitted.

JAMES G. ROSS,
A. F. C. ROSS,
JOHN W. ROSS,
Chartered Accountants.

Montreal, Nov. 30, 1915.

mean to decry the usefulness of the honest, straightforward, conscientious routing agency, independent traffic manager, or freight bill auditor.

"A case recently came to our notice where a solicitor walked into a small shipper's store in a western town. He said he represented the X.Y.Z. Audit Company. The shipper said he thought his freight bills were all right. The solicitor said that for only \$10 a year his concern would route all the shipper's traffic, quote all the rates he wanted, and audit his freight bills for 50 per cent. He then asked the shipper to permit him to examine his freight bills. Having been given a small number, he selected one at random and said: 'There, what did I tell you? There is a heavy overcharge on that shipment. I will give you \$10 for that freight bill if you will assign it to me.' He laid the money down. Naturally the shipper, figuring that what was worth \$10 to the solicitor was worth \$10 to him, said he would keep the bill, but he signed for the service and paid for it. He then forwarded the freight bills to the home office of the concern, who returned them with the information they were correct."

In support of the above the following is taken from a circular letter of one of these bureaus:

"We will audit your freight bills for a total of six years, guaranteeing that the overcharges found therein will exceed all costs. If the overcharges shown at the completion of the period mentioned do not exceed the cost we will audit future freight bills from that date free of charge until refunds have been received to equal payments to the company."

They further agreed to furnish clients free of charge with copies of the Canadian, Official, Western, and Southern Freight Classifications; to advise on any subject pertaining to freight transportation, proper routing, correct classification, loading, etc.; handle loss and damage claims; establish new or lower freight classifications; institute reparation claims before the proper bodies, etc., etc.

Limits to Possible Service.

The service offered is considerable, especially the guarantee to establish new ratings in the freight classification and institute reparation claims. Changes in classification cannot be made except through the Canadian Freight Association. Reparation claims as they are understood in the United States cannot be made in Canada, as the Canadian Railway Act does not permit of refunds being made in the sense in which the term is used.

These bureaus undoubtedly thrive more or less upon the carelessness of the railways, and the shippers and receivers of freight. Just so long as the former continue to neglect to check their billing for overcharges and errors in classification and extensions and shippers and receivers on their part do not check freight bills, will these bureaus exist. With well organized offices there is no particular reason why freight charges should not be checked just as closely as any other accounts payable. Unfortunately, however, in many cases, it does not seem to be the practice to do so because it is claimed that it is almost impossible to check railway charges on account of the intricacies of the tariffs and classifications. These difficulties are more or less imaginary, and may be easily overcome.

Unsubstantial Promises.

As better illustrating the methods employed by some of these agencies to secure clients, a prominent manufacturer who agreed to pay an annual fee of \$55 for their service, was advised shortly after signing the contract that over-

charges amounting to \$468.45 had been discovered on a certain number of shipments which had been received. Some time afterwards advice was received that corrections had been made reducing a certain number of claims, amounting to \$384.48, to \$16.47. Notwithstanding this, it is stated that the original advice of the overcharges discovered has been used in soliciting contracts with other manufacturers. Of the claims amounting to \$468.45, \$33.11 have been paid. The audit company have taken \$23.71, leaving \$9.40 for their customer, who, as stated already, paid \$55 for their services for a year.

There is no doubt but that some members have got back moneys through these agencies collected through gross carelessness on both their part and that of the railway companies. It is an illegal act for any railway company to collect more than what is called for by freight tariffs and classifications, as it is illegal for a shipper or receiver to misdescribe his goods for the purpose of securing cheaper transportation.

It is up to the Railways.

Whilst the railways claim that they do not favor these bureaus, so far they have given no evidence of any attempt to check billing for overcharges as closely as they do for undercharges, and make immediate refunds without waiting for claims to be filed. Apparently they are willing that these bureaus should continue to flourish at the expense of the shipping public.

The Interstate Commerce Commission has ruled that on all unsettled claims for overcharges carriers must pay interest from the time the charges are improperly collected. Application has been made to our Board of Railway Commissioners for an order fixing a penalty for the illegal collection of tolls similar to that imposed by order of the Board upon the public for misdescription of freight. There is undoubtedly the same justification for penalizing a carrier for the improper collection of tolls as there is for fining a shipper who wilfully misdescribes his goods. So far, however, no action has been taken.

The railways in the United States, particularly west of Chicago, have instructed their agents to closely check all waybills for errors such as mentioned. The result has been most satisfactory to all concerned.

The following is an extract from the instructions to agents issued by the auditor of one of the large Western lines:

"Receiving agents should examine all waybills carefully, and correct errors in classification weights, rates, extensions and footings of both weights and charges before collecting charges or reporting waybills, except that errors in extension of less than five cents need not be corrected.

"Errors in freight charges, discovered by the receiving agent after waybills have been reported, should be adjusted by waybill correction.

"If an overcharge, and if not collected, the agent should make new freight bill for the correct amount and send the erroneous freight bill and receipt to Auditor Freight Accounts. . . . If the charges have been collected, the receiving agent should take up the original freight bill, issue a corrected one marked 'Corrected,' and make waybill correction, refund the overcharge to consignee, take his receipt on waybill correction, and send it with the original freight bill, to the Auditor Freight Accounts, with freight balance. . . .

"Refund should be made when possible, but if notice sent to consignee is not complied with, within ten days, advise Auditor Freight Accounts, enclosing corrections."

(Continued on page 982.)

London Fair and Market

The Federation of Foreign Chambers of Commerce in the United Kingdom are acting as an Honorary Advisory Committee to the Organisers, so that the Chambers may assist in influencing Buyers in their respective Chambers to visit the London Fair.

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Toys, Games, Sports Goods, Jewellery and Silverware, Optical Goods, Art Metal Ware and Hardware. Furniture and Furnishing Goods, Office Equipment, Musical Instruments.

Fancy Goods of all descriptions, Hard Haberdashery, and Notions. Stationery, Printing and Publishing, Leather Goods of all descriptions. Pottery, China and Glass.

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and OLYMPIA, London
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Canadian Manufacturers requiring to show samples should make IMMEDIATE enquiry of the Organisers.

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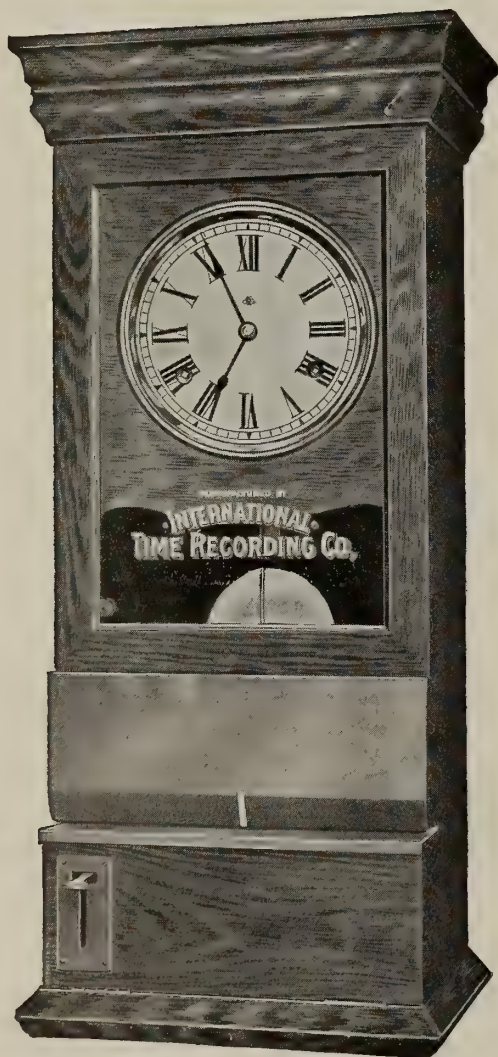
Telegrams: "Promenade Ave., London."

Telephone: London Wall 547.

J. E. PELLETIER, International Commerce Company, 64 St. Joseph Street, Quebec, Canada
G. F. COWPER, International Commerce Company, P.O. Box 1027, Halifax, Nova Scotia
W. E. ORR, International Commerce Company, 22 Lawlor Building, Toronto, Canada
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The Mechanical Cost Keeper

Manufactured by the International Time Recording Company and illustrated below does at least two very important things.



1. It shows the exact amount of productive labor you *are able* to charge up against any given job.

2. It shows exactly the amount of "non-productive" labor you are paying for but *are not able* to charge against any job.

When the Mechanical Cost Keeper is used no workman or foreman can force a balance between his productive and his non-productive time. The machine is cold-blooded, accurate and mechanically correct. The Mechanical Cost Keeper throws a searchlight on a very important part of your overhead expenses—that is, the non-productive labor in your plant.

We will be glad to send you particulars, or advice on any Time Recording System you wish to install. We are the largest makers of time recording machinery in the world.

International Time Recording Company of Canada, Limited

F. E. MUTTON,
Manager

TORONTO

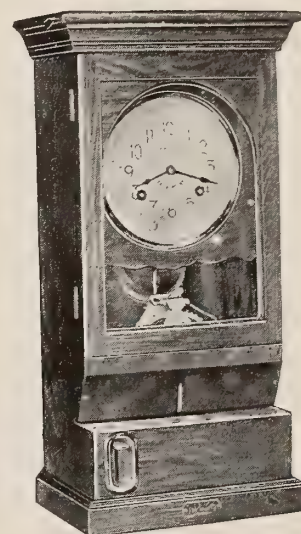
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The cost of a manufactured article consists of three parts or items: Overhead expense, raw material and time or labor. We arrive at the overhead expense by adding up all of the items of fixed charges, office expense, selling expense, oil, fuel, waste, etc., which cannot be charged direct to any specific article. In this overhead expense the cost of non-productive labor should be added—it can be obtained by dividing your pay-roll into two parts, productive and non-productive.

It is easy to obtain the cost of material that enters into your product, but the time or labor is the slippery element of cost because the proper overhead proportion is usually difficult to ascertain. By the use of the International Mechanical Cost Keeper you can get the elapsed time of every operation and every job. You can get the exact labor cost to a cent ON EVERY ORDER that goes through your works. You get the non-productive hours which will give you the proper overhead proportion of your wage total. You will find in the working out of this plan that it will save you thousands of dollars a year.



The International Mechanical Cost Keeper—Simple, Efficient, Economical

The Exact Time on Every Job

This illustration shows a reduced fac-simile of record from International Mechanical Cost Keeper. The picture shows the record sheet bound up with others for convenience. Any size record may be used. The exact time spent on any given job or operation is shown in the right hand margin. This record sheet can follow a job all through the factory. If you wish a coupon tag to follow the work, each operator detaching a coupon to show the work he did, the Mechanical Cost Keeper will show the elapsed time on each coupon. Many variations can be worked out to suit any business.

OUR GUARANTEE

We offer \$100.00 reward to anyone who will buy a new International Time or Cost Recorder at under list price less our regular discount.

NAME <i>James Morris</i>	No. <i>27</i>	DATE <i>APR 16 1908</i>	RATE <i>30¢</i>						
ARTICLE OR DESCRIPTION	OPERATION	QUANTITY	ACCEPTED	REJECTED	PARTS No.	ORDER No.	AMOUNT	ELAPSED TIME	CLOCK RECORD
<i>Iron spindles</i>	<i>Drilling</i>	<i>9</i>	<i>9</i>		<i>H-4-1</i>	<i>702</i>	<i>.354</i>	<i>1.18</i> <i>.30</i> <i>.3540</i>	<i>2 818</i> <i>2 700</i>
<i>Shift lever</i>	<i>Slotting</i>	<i>50</i>	<i>50</i>		<i>H-1-1</i>	<i>698</i>	<i>.354</i>	<i>1.18</i> <i>.30</i> <i>.3540</i>	<i>2 936</i> <i>2 818</i>
<i>Wheels</i>	<i>Milling</i>	<i>100</i>	<i>98</i>	<i>2</i>	<i>H-9</i>	<i>647</i>	<i>.396</i>	<i>1.32</i> <i>.30</i> <i>.3960</i>	<i>2 1068</i> <i>2 956</i>
	<i>Cutting</i>	<i>77</i>	<i>74</i>	<i>3</i>	<i>H-9-2</i>	<i>709</i>	<i>.330</i>	<i>1.10</i> <i>.30</i> <i>.3300</i>	<i>2 1178</i> <i>2 1068</i>
	<i>Drilling</i>	<i>44</i>	<i>44</i>		<i>H-3-8</i>	<i>842</i>	<i>.288</i>	<i>.96</i> <i>.30</i> <i>.2880</i>	<i>2 1274</i> <i>2 1178</i>
	<i>Drilling</i>	<i>20</i>	<i>20</i>		<i>510-1</i>	<i>764</i>	<i>.396</i>	<i>1.32</i> <i>.30</i> <i>.3960</i>	<i>2 1206</i> <i>2 1274</i>
	<i>Drilling</i>	<i>20</i>	<i>20</i>		<i>510-2</i>	<i>807</i>	<i>.330</i>	<i>1.10</i> <i>.30</i> <i>.3300</i>	<i>2 1513</i> <i>2 1206</i>
	<i>tech</i>	<i>40</i>	<i>38</i>	<i>2</i>	<i>515-1</i>	<i>725</i>	<i>.294</i>	<i>.98</i> <i>.30</i> <i>.2940</i>	<i>2 1614</i> <i>2 1513</i>
		<i>20</i>	<i>20</i>		<i>516-2</i>	<i>745</i>	<i>.258</i>	<i>.86</i> <i>.30</i> <i>.2580</i>	<i>2 1700</i> <i>2 1614</i>
TOTAL COST							<i>3.000</i>	<i>10.00</i>	TOTAL TIME

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International Time Recording Company of Canada, Limited

F. E. MUTTON,
Manager

TORONTO

MONTREAL:
Cartier Bldg.

TRANSPORTATION

(Continued from page 976.)

It is the practice of this particular railway that when an overcharge is discovered which cannot be refunded to the consignee, the auditor immediately writes a letter to the shipper advising of the overcharge, and telling him that upon surrender of the original freight bill, refund will immediately be made. Action of this kind will establish confidence on the part of the shipping public, and tend more quickly than anything else to obviate the necessity for these bureaus.

Members who have not already done so are recommended to secure copies of freight tariffs and classification in which they are interested, and to give the same attention to their freight bills as they do to other matters of probably less importance which arise in the daily routine of their businesses.

As regards employing the services of these agencies who have recently sprung up in Canada, it would be well to make enquiries before entering into a contract with them as to the procedure followed and the methods employed in securing refunds of overcharges, which according to their circulars are so universal.

NOW MADE IN CANADA.

Through inability to get supplies within a reasonable time from the regular sources in the United States the Canadian Independent Telephone Co., Ltd., 263 Adelaide St. West, Toronto, decided that they would serve their own needs and manufacture what they needed themselves.

The result has been that this company is now making high speed thread milling hobs, the large percentage of

which have always been imported heretofore. So satisfactory is the product that the present prospects are that the output will only be limited by the available supply of the right quality of tool steel.

CUSTOMS TARIFF ON FIRE BRICK.

The Board of Customs have cancelled all prior rulings relative to fire brick and substituted the following:—

Declaration of Board of Customs, Ottawa, 20th December, 1915. In re Item 281, Customs Tariff, 1907.

That the following fire brick shall be rated as a class or kind not made in Canada, and admitted free of duty, viz.:—

(1) Rectangular fire brick of nominal dimensions, 9" x 4½" x 2½", valued at more than \$16.00 per thousand at the place of export.

Note—Brick exceeding the above by not more than ¼" in any dimension may be included.

(2) Rectilinear brick of fire clay not over 9" long, not over 4½" wide and not over 2½" thick, valued at more than 23½c. per 100 pounds at the place of export.

(3) Magnesia fire brick.

(4) Chrome fire brick.

(5) Silica fire brick when composed of not less than 90 per cent. silica.

RE DUTY ON GIFTS TO SOLDIERS STATIONED IN BERMUDA.

No Customs duty is payable on parcels containing gifts addressed to members of Canadian Expeditionary Force serving in Bermuda.

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BRANDS:

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XXX Extra, X Grand,
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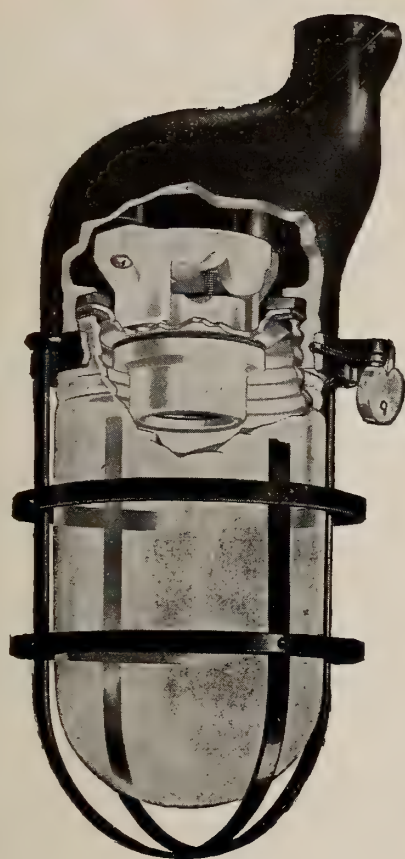
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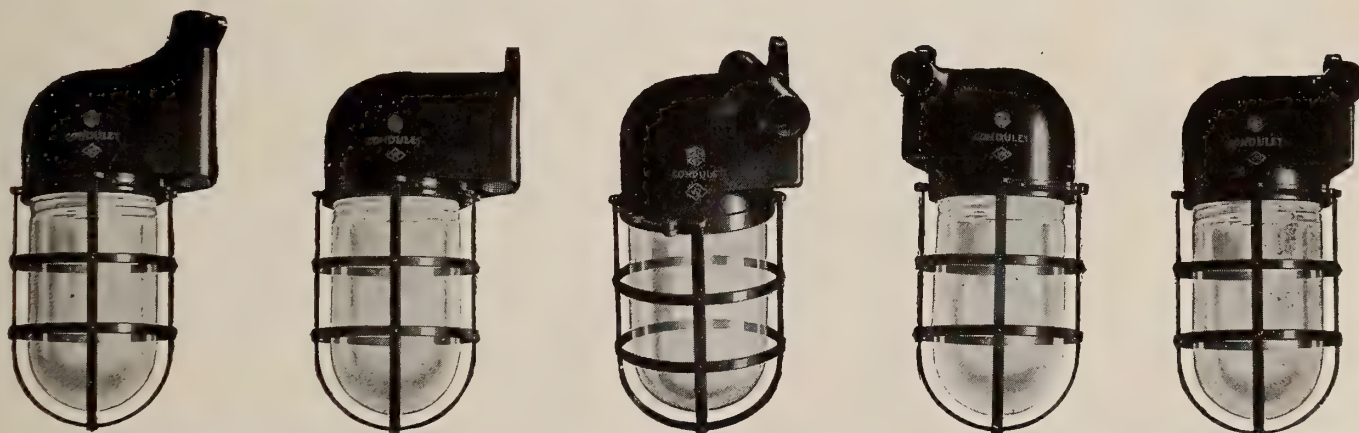
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MISS MARGARET CARLYLE, Parliament Buildings, Toronto.
MRS. A. BROWN, Parliament Buildings, Toronto.
THOMAS KEILTX, 25 Russell Avenue, Ottawa.
S. J. MALLON, 214 Wellington Street, Stratford.
FRED KELLOND, 157 Wellington Street South, Hamilton.
H. J. TUTT, 13 Enderby Road East, Toronto.

Persons having business with any of the Inspectors will find them at the above address. HON. JAS. S. DUFF, Minister of Agriculture. Phone Main 5800.

NOTICE

TO STATIONARY AND HOISTING ENGINEERS

Everyone operating a STATIONARY steam plant of 50 h.p. or over in the Province of Ontario must hold a Stationary Engineer's Certificate from the Board of Stationary and Hoisting Engineers. Anyone operating such a plant without a Certificate is liable to the penalties set forth in the Stationary and Hoisting Engineers' Act.

Everyone operating a HOISTING steam plant working at a pressure of 20 pounds or over irrespective of horse power, and used for hoisting in structural operations or excavating purposes, in the Province of Ontario, must hold a Hoisting Engineer's Certificate from the Board of Stationary and Hoisting Engineers. Anyone operating such a plant without a Certificate is liable to the penalties set forth in the Stationary and Hoisting Engineers' Act.

Application forms for obtaining STATIONARY or HOISTING Engineers' Certificates, may be had upon applying to the Chairman.

Hon. JAS. S. DUFF,
Minister of Agriculture.

W. C. McGHIE,
Chairman of Board.



NOTICE

To Manufacturers, Dealers and Users of Steam Boilers.

All steam boilers built in, or entering the Province of Ontario, and boilers exchanged or repaired, are subject to Government Inspection as prescribed in the Steam Boilers Act, 3 George V., C. 61.

Before any work of repair or alteration is commenced on any boiler, notice must be sent to the Department stating the nature and extent of the repairs or alterations proposed to be made. If the Chief Inspector should consider such repairs or alterations of an extensive character, the boiler must be inspected in accordance with the Regulations by an Inspector authorized under the Act.

All communications should be addressed to the Steam Boiler Branch, Department of Public Works, Parliament Bldgs., Toronto.

HON. FINLEY G. MACDIARMID, D. M. MEDCALF,
Minister of Public Works, Chief Inspector of Steam Boilers.

TRADE ENQUIRIES

These enquiries come into our hands from various sources. The Weekly Bulletin of the Department of Trade and Commerce, from which the enquiries indicated in the sub-heading allotted to them are taken, should be read regularly by those interested in foreign trade. It will be sent free on application to the Department at Ottawa.

DOMESTIC TRADE ENQUIRIES.

294. **Potash.**—A Canadian manufacturer using considerable quantities of Potash 80 to 90 per cent. pure., at intervals during the year, would like to get in touch with anyone able to supply same.
295. **Cheese Box Veneers.**—An Eastern Ontario manufacturer desires to get in touch with producers of veneer suitable for making cheese boxes.
296. **Fireclay Products.**—A firm in the Niagara Peninsula would like to communicate with firms economically located for producing fireclay products which they wish to purchase.
297. **Small Billiard Tables.**—A British Columbia enquirer would like to hear from makers of the above named article.
298. **Lodge Room Seating.**—A lodge Secretary in Eastern Ontario will consider quotations from manufacturers making a specialty of this seating.
299. **Advertising Specialties.**—A Western firm handling various advertizing accounts wishes to get in touch with manufacturers of various kinds of advertizing novelties and specialties.
300. **Spools, Bobbins, etc.**—A Toronto firm wishes to get full information as to firms manufacturing the above mentioned articles and other hardwood specialties.
301. **Friction Board.**—A Western firm requires supplies of red friction board 3-16 in., 1-4 in. and 5-16 in. thick.
302. **Gasoline Engines.**—A Western firm would like to hear from manufacturers of Double Opposed Gasoline Engines from ten to sixty H.P., two or four cylinder, vertical auto type engine, suitable for tractor purposes.
303. **Link Belting.**—The same company is interested in obtaining link belting chain.
304. **Sheet Celluloid.**—An Alberta enquirer wishes to obtain supplies, presumably small, of sheet celluloid.
305. **Crushed Granite, etc.**—An Ontario manufacturer would like to get into communication with companies able to supply finely crushed granite or other hard rock.
306. **Desks.**—A party in Nova Scotia, holding a patent on a desk requiring good cabinet work, would like to get in touch with a manufacturer in a position to make and sell same.

L. W. MANCHEE, President

W. P. BENNETT, Vice-President



This entire building, 52,500 square feet, is devoted entirely to the manufacture of paper boxes. Ask for prices.

Rudd Paper Box Co., Limited

372-374-376 Richmond Street West

Toronto, Canada

CANADIAN TUBE & IRON CO., LIMITED

MONTREAL, CANADA

Ask Your Jobber for

WROUGHT PIPE BLACK AND GALVANIZED
1/8 TO 4 INCH

Thoroughly inspected and tested
to 600 lbs. pressure and branded.



Brand

Also BOLTS, NUTS, RIVETS—All Kinds

SELLING AGENTS:

Canadian Rolling Mills Co., Limited

BAR IRON AND STEEL

Colonial Wire Mfg. Co., Limited

WIRES, WIRE NAILS, WOOD SCREWS, ETC.

WORKS: LACHINE CANAL

MONTREAL, CANADA

307. **Cutlery.**—The Premium Department of a Canadian manufacturing house wishes to learn of any Canadian manufacturer able to supply cutlery articles suitable for their purpose.
308. **Porcelain Lined Kettles.**—A well known manufacturing company would like to hear from another Canadian manufacturer able and willing to supply porcelain lined steam jacketed kettles.
309. **Iron Box Straps.**—A Saskatchewan manufacturing company would like to obtain supplies of these from Canadian manufacturers.
310. **Foundry and Machine Shop Work.**—A United States firm wishes to have some work, requiring both a foundry and machine shop, done in Toronto or the neighborhood and would be glad to hear from properly equipped firms.
311. **Lamp Burner.**—A Western inventor claims to have a good working model of a burner designed to do away with the necessity of blowing out the light, and would like to hear from a manufacturer interested in taking it up.
312. **Hat Holder.**—The same party is in a similar position with regard to a hat holder suitable for a church and public building use.
313. **Agencies.**—A British Columbia firm at present interested in dry colors, cocoa mats, glue, polishes, stains, brushes, etc., is in a position to handle additional

agencies along similar lines, and will be glad to furnish references to manufacturers who have a suitable proposition to offer.

EXPORT TRADE ENQUIRIES.

314. **Patents and Specialties.**—An English Commission agent, claiming to have an unrivalled connection in large manufacturing centres there, wishes to get in touch with some large Canadian manufacturers with the object of being appointed their accredited British Representative. His turnover for present principals amounts to \$200,000 per annum, and he is willing to give bankers' and other references upon application.
315. **Wooden Button Moulds.**—A London firm are in the market for Canadian made wood button moulds. We can furnish the name of a Canadian official in London who will supply the proper address.
316. **Box Boards.**—A London firm wish to get into touch with Canadian makers of box boards. We can furnish the name of a Canadian official in London who will supply the proper address.
317. **Shoe Rivets.**—We are able to put manufacturers of these in touch with an English opportunity.
318. **Lanterns.**—An American export and import house interested in the African market would like to get in touch with Canadian manufacturers of Banner hurricane lanterns.



—the King of Brush-Settings

BEX-O-LAC is a brush-setting of an entirely different nature to any of the so-called compounds used by Brush Manufacturers to set the Bristles in, as we found that we could not depend on the many mixtures with rubber, resin, etc., for their basis.

And Furthermore

BY USING BEX-O-LAC THE BRUSHES ARE NOT SUBJECTED TO ANY PROCESS INVOLVING INTENSE HEAT, TO HARDEN THE SETTING, AS SUCH IS VERY INJURIOUS TO THE ELASTICITY AND PAINTING QUALITIES OF THE BRISTLES.



After several years of experimenting, we have been successful in working out a formula—the product being superior to anything now used as a brush-setting, and one that will absolutely, under all conditions, hold each and every bristle firmly in its place.

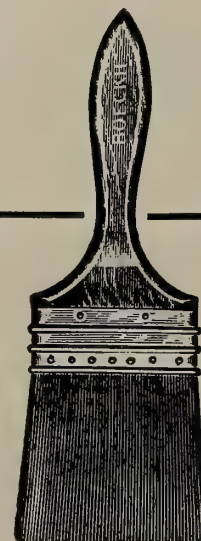
This brush-setting is protected under the registered name of "Bex-o-lac," and is used only in the manufacture of

Boeckh's Painters' Brushes

which are guaranteed not to shed the bristles.

THE BOECKH BROS. COMPANY, Ltd.
TORONTO - CANADA

*The Bristles
Can't Come
Out*





will convince you of this fact :

That it is cheaper to use two files where you now use only one.

Take a certain piece of work and give one man a new file, and another a half worn file on a similar piece of work.

The man with the new file is doing what you are paying him for. The other man is filing away your time.

The man with the new file takes a pride in his work.

The man with the old file starts with a grouch, and the work suffers.

When the inefficient point in the files is reached it is good policy for you to have your men discard them.

And they should be replaced the five famous brands :

**KEARNEY & FOOT
GREAT WESTERN
AMERICAN
ARCADE
GLOBE**

(Made in Canada)

Made in Canada by a plant controlling 90% of the file business.

Backed by 50 years' experience in the making of efficient files.

*Send for your FREE copy
of "File Philosophy" NOW.*

NICHOLSON FILE COMPANY
Port Hope (Dealers everywhere) Ontario

"Metallic" Building Materials

Brighten up the Office, Show-rooms
or Warehouse with

"Metallic" Ceilings and Wall Plates

You couldn't get a more handsome wall covering—nor one easier put on—nor one that would be as Sanitary and as easily kept clean. And the biggest advantage of all is the fire retardent feature. Let us send you illustrations and price lists.

"Eastlake" Galvanized Shingles
"Metallic" Siding
"Empire" Corrugated Iron
Skylights; "Metallic" Lath; Cornices
Ventilators, etc.

The Metallic Roofing Co., Limited
Manufacturers
TORONTO WINNIPEG



SAWS FOR SHELLS

We have experimented on the

SPECIAL SHELL STEEL

and have produced a
HACK SAW BLADE
that will give unequalled
service on this material in
HIGH-SPEED MACHINES

Possibly we could help you.

"Victor Blade—
Canadian-Made"

VICTOR SAW WORKS, LTD.
HAMILTON, ONT.



319. **Food Products, Leathers and Hides.**—A commercial agent in France wishes to represent exporters of food products, leather and hides.
320. **Metal, Ores, Minerals, Raw Materials for Manufacturing purposes.**—A Paris firm of commission agents desires to represent Canadian exporters of metal, ores, raw material.
321. **Wood Pulp.**—A firm wants to import wood pulp, and asks quotations.
322. **Condensed Milk.**—An important firm in France desires to import condensed milk.
323. **Paper.**—A firm in Bordeaux, offering good French references, is interested in importing particularly envelope, writing and printing papers. He desires to have offers c.i.f. Bordeaux on cash against document terms.
324. **Railway Material, etc.**—A French firm of engineers and contractors would like to represent Canadian factories in a position to supply forgings, coupling chains, hooks and chain tighteners, steel castings, steel bars and sections.
325. **Agency.**—A Russian who has spent two years in Canada familiarizing himself with conditions here would like to get into communication with large Canadian firms who are considering representation in Russia.
326. **Zinc Oxide.**—We have a number of enquiries for this material.

327. **Mosaic & Terrazzo Flooring.**—A South American firm of importers is desirous of getting in touch with Canadian manufacturers capable of supplying these materials.

328. **Representation.**—We have a communication from a party in the United States who has served in various commercial capacities in Europe, Mexico, South America and British West Indies. He wishes to undertake agencies for Canadian manufacturers in any foreign field and claims to be able to submit high references.

328a. **Foreign Representation.**—A party with long experience in handling builders' and contractors' supplies and other materials, and who has also had considerable experience in varied export lines is desirous of communicating with Canadian manufacturers with a view to associating with them as their representative in foreign markets. The highest business and personal references are offered.

**EXPORT TRADE ENQUIRIES TAKEN FROM THE
WEEKLY BULLETIN OF THE DEPARTMENT
OF TRADE AND COMMERCE.**

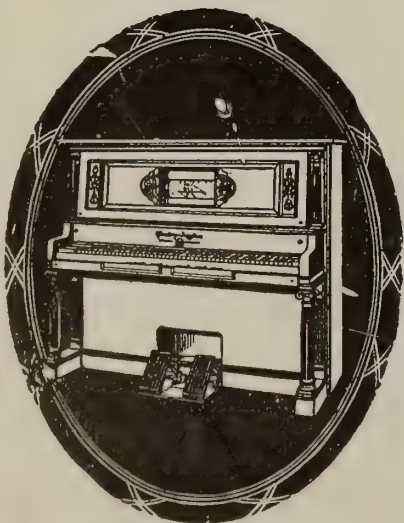
329. **Wire Netting.**—A hardware firm in Barbados desires to receive quotations for poultry netting, 1½ inch and 2 inch mesh; also catalogues of wire netting generally.

330. **Paper.**—A confectionery manufacturer in Cape Town requests samples and quotations in ton lots or more on all kinds of paper suitable for sugar candy and

Men forget business cares in the enjoyment of

Gourlay-Angelus

Player-Pianos



A GOURLAY-ANGELUS provides ANYONE with the ability to play ANY music artistically.

In the opportunity for recreation thus afforded, many busy men find enjoyment hitherto undreamed of, as well as a complete rest from the business worries and cares of the day. If you find it hard to leave these cares behind you when you go home, depend upon it, a Gourlay-Angelus will make you forget them.

One Toronto manufacturer tells of this pleasure in a Gourlay-Angelus as follows:—"I have always been glad I purchased the Gourlay-Angelus. The longer I have it the more I enjoy it and the more I use it."

Write for Catalogue and Prices

GOURLAY, WINTER & LEEMING,
188 Yonge St., Toronto

THE CANADIAN BANK OF COMMERCE

SIR EDMUND WALKER, C.V.O., LL.D., D.C.L., President

JOHN AIRD
General Manager

H. V. F. JONES
Ass't General Manager

CAPITAL PAID-UP, \$15,000,000
RESERVE FUND, \$13,500,000

Extension of Canadian Trade

The Bank will make enquiries into the possibilities and requirements of markets abroad for exporters or importers who desire to extend their trade with British colonies or possessions. Owing to the large number of its correspondents and agents it has unusual facilities for this work.

S 57

THE ROYAL BANK OF CANADA

Incorporated 1869

Capital Authorized . . . \$25,000,000
Capital Paid up . . . \$11,560,000
Reserve & Undivided Profits \$13,000,000
Total Assets . . . \$180,000,000

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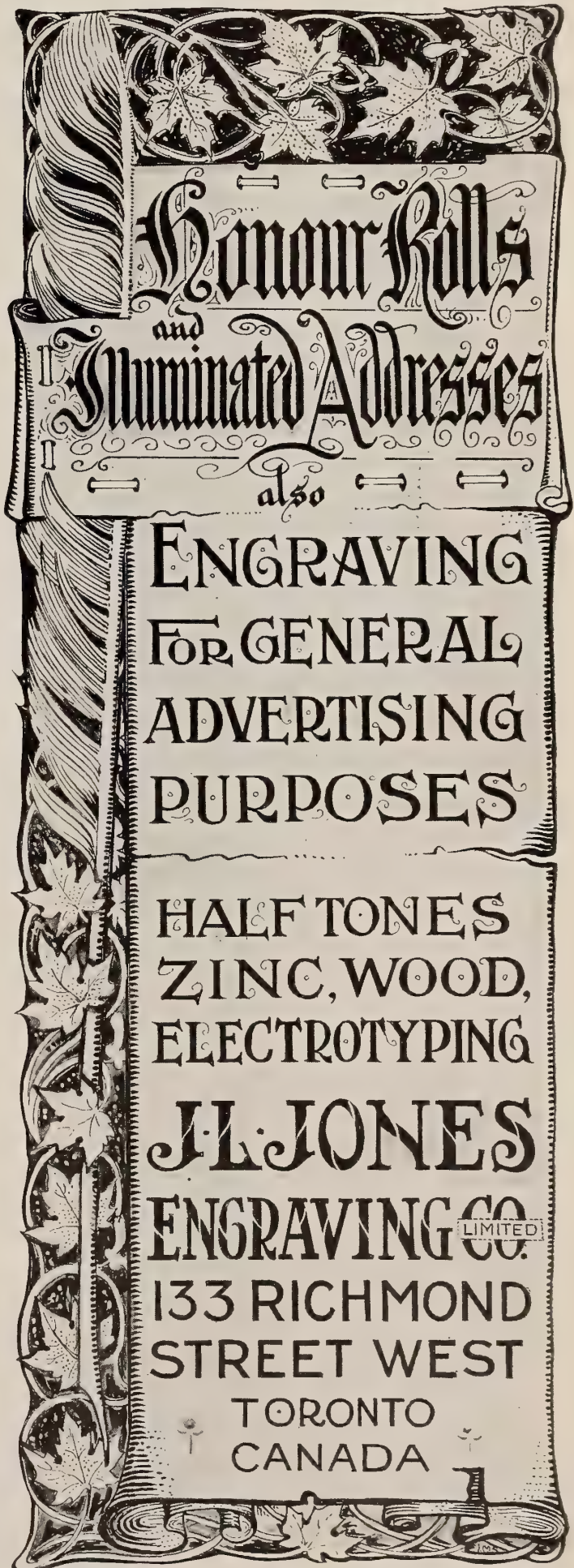
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Branches in every Province of the DOMINION OF CANADA and in NEWFOUNDLAND; in HAVANA and throughout CUBA, Porto Rico and Dominican Republic; BAHAMAS, Nassau; BARBADOS, Bridgetown; JAMAICA, Kingston; TRINIDAD, Port of Spain and San Fernando; BRITISH HONDURAS, Belize.

LONDON, ENG., OFFICE—Princes St., E.C.

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Honour Rolls
and
Illuminated Addresses
also

**ENGRAVING
FOR GENERAL
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**HALF TONES
ZINC, WOOD,
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**J. L. JONES
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**133 RICHMOND
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CANADA**

Hear Us For Our Cause !



We want
to equip your
plant with

Esty Fire Sprinklers

and show you
how to reduce
insurance
costs 50 % to
80 %.

IT'S A GREAT BIG MONEY SAVER.

Write :

H. G. VOGEL CO. CANADA LIMITED
169 Duke St., MONTREAL, P.Q.

high class chocolate boxes, also on wrapping paper, white kraft and other. Samples of kinds now in use are being forwarded to the Department of Trade and Commerce, Ottawa.

331. **Calcium Carbide.**—A firm in London wishes to obtain quotations from Canadian manufacturers of calcium carbide for shipment to South Africa.
332. **Talc, Soapstone, French Chalk.**—A Glasgow firm desires the addresses of Canadian producers and exporters of the above.
333. **French Chalk (talc).**—A chemical manufacturing company in the English Midland counties asks to be placed in touch with Canadian shippers of French chalk (talc).
334. **Hardware Specialties, Household Articles, etc.**—A London company are desirous of securing the agency of Canadian manufacturers of hardware specialties, household articles, and labor-saving devices.
335. **Electrical Machinery and Apparatus, Steam and Naphtha Engines, Water Turbines.**—A Russian company, who control the use and sale of these goods to the Lighting Stations and Electric Railways in several Russian towns, would like to get in touch with high class Canadian factories producing these goods with a view to becoming their agents in Russia. Suitable references are offered.
336. **Metal Handbag Frames.**—An opportunity is said to exist for supply of metal handbag frames running from 6 in. to 10 in. long. We can supply the name of the party in a position to give the information.

PURDY, MANSELL LIMITED —TORONTO—

Cut your Insurance in half by having us
instal an

Automatic Fire Sprinkler System

throughout your Factory, Store or Ware-
house.

The Original



The Best

Write us for Estimates

Correspondence Solicited



Canadian
Chicago Bridge & Iron Works
Bridgeburg, Ontario

ELEVATED STEEL TANKS AND STANDPIPES

For Municipal, Railroad
and Factory Service

We also build Oil Tanks, Coaling Sta-
tions, Bridges, Turntables, Buildings and
Structural Material. Write for illus-
trated Catalogue No. 25.

Offices:

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Chicago, Ill., 1316 West 105th St.
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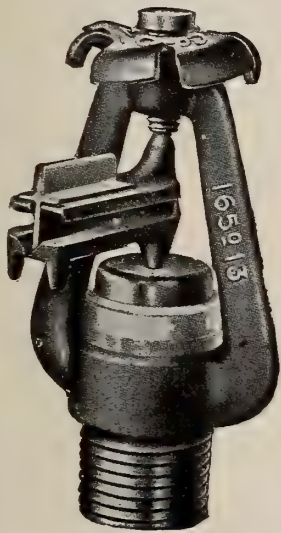
BRIDGEBURG, ONTARIO
Greenville, Pa. (Pittsburg District)
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CHIEF OFFICE FOR CANADA, TORONTO



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Nearly 80% of Your Insurance Premiums are a Total Loss



It is possible for you to save 80% of your Insurance Premiums and at the same time carry your present insurance. In addition, you can enjoy absolute immunity from fire.

MANUFACTURERS' AUTOMATIC SPRINKLERS

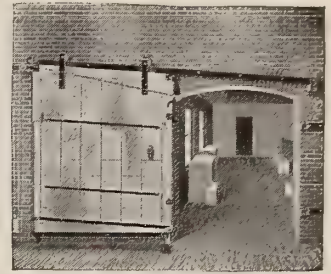
afford the best possible protection from fire, cutting down your insurance at the same time.

WRITE FOR PARTICULARS

The General Fire Equipment Co., Limited
72 QUEEN ST. EAST, TORONTO, ONT.



Parallel Door Hardware



Fire Door Hardware—All Styles with Underwriters' Label



CARRIER SYSTEMS I-Beam or Trolley

Save Money on Your Factory Transportation



BULLDOG STEEL JOIST HANGERS
They never let go!
Stronger than malleable

"R-W" HANGERS and Carrier Systems are specified by leading architects and engineers throughout Canada and the United States. Catalogues and estimates will be cheerfully furnished.

Richards-Wilcox
CANADIAN COMPANY, LTD.
LONDON, ONTARIO.



"R-W" Trolleys are best for all sliding doors



Sprinkler TANKS and TOWERS

also wood and steel tanks for Municipal, Railway and Suburban water supply.

All our tanks and towers are built to pass inspection of any Board of Fire Underwriters.

Send for special tank and tower catalogue.

Galvanizing Hot and Electro

We do all kinds of hot and electro galvanizing for the trade. Our plant is one of the largest in Canada and our charges reasonable. Write us for quotations on your galvanizing work.

Ontario Wind Engine & Pump Co., Limited
TORONTO MONTREAL WINNIPEG CALGARY

Goold, Shapley & Muir Co.

LIMITED

BRANTFORD : WINNIPEG : REGINA : CALGARY

MANUFACTURERS OF
GAS AND GASOLINE ENGINES

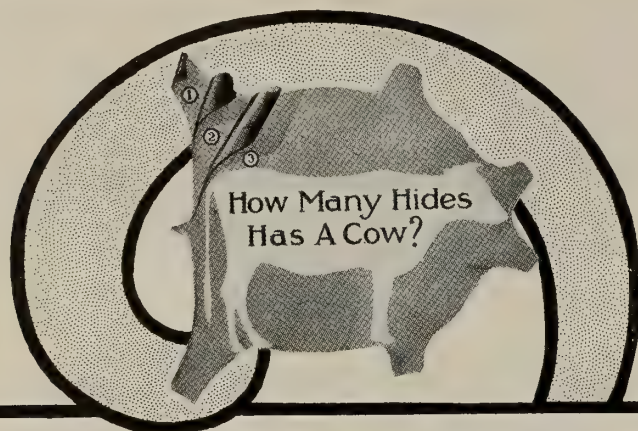
TANKS AND TOWERS FOR Sprinkler Systems

TOWN WATER SUPPLY
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PUMPS
CONCRETE MIXERS
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Write, if interested





FOR information which answers this question and acquaints you with the merits of DU PONT FABRIKOID—an artificial leather of guaranteed quality—write for descriptive booklets. Special grades for different purposes. Tell us your requirements—there is Fabrikoid suited to them.

ADDRESS DEPARTMENT 453
DU PONT FABRIKOID CO., Toronto



REG. U. S. PAT. OFF.

DENNISTEEL
LONDON - CANADA

THE BEST STEEL LOCKERS MADE IN CANADA

MADE BY
THE DENNIS WIRE AND IRON WORKS CO. LIMITED
LONDON, CANADA



POWER PRESSES DROP AND SCREW

SHEET METAL
STAMPINGS
DIES AND TOOLS

W. H. Banfield & Sons

370-384 Pape Ave. Toronto

WILL PRODUCE POTASH.

The Chemical Refinery Ltd., are building a plant in St. Catharines for the manufacture of potash. Their product will be used for fertilizer and for glass-making purposes. This is a new line of industry in Canada made necessary by the war.

AMONG THE INDUSTRIES

We direct the attention of our readers to this department, which has greatly enlarged and improved. Arrangements have been made to secure interesting news of manufacturing from all parts of Canada. We shall be glad to publish items of interest to manufacturers free of charge in this department provided they should not be properly classified as advertisements. If you have interesting items please send them in.

BRITISH COLUMBIA.

Burnaby, B.C.

The Shell Oil Company have started work on clearing the site of their oil plant.

Fernie, B.C.

The Post Manufacturers of the Fernie district have organized an association on the same lines as the Mountain Lumbermen's Association.

The salmon pack of this province for 1915 has been very satisfactory, both in volume and in prices realized. The grand total is 1,133,381 cases against a pack last year of 1,111,039 cases. This constitutes a record for an "off" year, although several of the "big" years have exceeded the figure. Every fourth year is a "big" run.

Greenwood, B.C.

The B. C. Copper Company, Ltd., are planning the installation of a flotation plant at their Greenwood property with a daily capacity of 2,000 tons. The company now have 10,900,000 tons of proven ore with an average of 1.75% copper and gold and silver values, sufficient for 15 years' operation of the plant when completed.

Ladner, B.C.

The Duchesnay Packing Co., Ltd., have enlarged their works at Ladner, having received contracts for considerable quantities of dessicated vegetables. They are now employing about 100 hands.

New Westminster, B.C.

The Vulcan Iron Works, Ltd., New Westminster, have leased the car building shops of the British Columbia Electric Railway Co., Ltd., at New Westminster, and are installing additional machinery and equipment for the carrying out of large government contracts recently received.

North Arm, B.C.

The Shull Lumber and Shingle Co., North Arm, have recently completed their new mill. This is one of the largest shingle mills on the coast, having a capacity of 1,350,000 per 24-hour day. Most of the product goes to the United States.

Vancouver, B.C.

McMasters Ltd., manufacturers of shirts and overalls, Vancouver, have sold their undertaking to the B. C. Shirt and Overall Manufacturing Co., Ltd.

Gault Brothers, Vancouver, have acquired the manufacturing department of the J. W. Peck Co., Ltd., wholesale clothing manufacturers.

The Royal Fish Co., Ltd., of Vancouver, have installed a crew of Scotch girls at their Pender Harbor station, for the preparation of pickled herring after the Scotch method. Watson Brothers of Vancouver are also engaging largely in this trade and others are preparing to enter it. The scarcity

THE CANADIAN APPRAISAL COMPANY LIMITED

TORONTO
ROYAL BANK BLDG.



NEW YORK
55 LIBERTY ST.

HEAD OFFICE : 4 HOSPITAL ST.
MONTREAL

THIS is a year in which investment costs, values and depreciation will have more significance and will receive greater attention than ever. It is an opportune time for you to know exactly what your plant is actually worth as a going concern.

This can only be known by having an appraisal of your properties.

Our appraisal and continuous service will be of great practical value to you as a standard work of reference in the operation of your business by establishing a sound, authoritative basis of costs and values for operating, accounting, cost finding, taxation, insurance and financial purposes.

The Canadian Appraisal Company, having appraised over 1500 properties in Canada, is in an unique position to understand and meet your requirements.

Valuations for

MUNICIPALITIES - PUBLIC UTILITIES - RAILWAYS

DELANY & PETTIT, LIMITED

**Joint and Veneer
Glue**

Always uniform.

OFFICE:

133 Jefferson Avenue,
TORONTO, ONT.



**Special Woodworking
Garnet Paper and
Cloth**

WORKS:

105-131 Jefferson Avenue
106-118 Atlantic Avenue

of the pack in Scotland has created a big demand from New York and Chicago and large orders are in this market from those centres.

The B. C. Milk Condensing Co., Ltd., who operate a large condensory at Sumas have sold out their undertaking to the Borden Milk Co., Ltd., manufacturers of the well-known "St. Charles" milk. It is stated the company will be operated from the Vancouver head-office, and it is intended to continue the present brand of "B. C. Milk." The present staff are being retained and the business will be considerably extended.

Lumbermen in the interior are experiencing some difficulty in obtaining labor for their winter logging camps, so many young men having enlisted.

The box factories on the coast have received large orders for box shooks for shipment to Europe and Australia, and are all working full time to capacity.

NEW BRUNSWICK.

Sackville, N.B.

The factory of the A. E. Wry Standard, Limited, was destroyed by fire on December 5, the loss being estimated at \$35,000 of which \$20,000 is covered by insurance.

NOVA SCOTIA.

Halifax, N.S.

The Williston Steel & Foundry Company have started work on the erection of a steel plant.

New Glasgow, N.S.

At an estimated cost of \$100,000 the Nova Scotia Steel & Coal Company are building an addition to their steel plant at Sidney Mines.

Canada-South Africa Direct Service

Regular monthly sailings from Montreal in Summer and St. John, N.B. in Winter, calling at Cape Town, Algoa Bay (Port Elizabeth) East London, Port Natal (Durban) and Delagoa Bay in the order named.

Sailings 20th of each month.
All steamers fitted with refrigerators for the carriage of perishable freight.

For rates of freight and other information apply to

ELDER DEMPSTER & CO., Limited
318-319 BOARD OF TRADE BUILDING - - MONTREAL
Toronto Agent: S. J. SHARP, 19 Adelaide E.

THE

New Zealand Shipping Company, Limited

CANADA

TO

Australia and New Zealand

Regular monthly sailings from Montreal in summer and St. John in winter, calling at Adelaide, Melbourne and Sydney (Australia), and Auckland, Wellington, Lyttelton and Dunedin (New Zealand).
Sailings 20th of each month.

Through bills of lading issued to all points in Australia, New Zealand, Tasmania and other islands of Oceania.

Marine Insurance effected at rates equal to those given from New York.

For rates and other information apply to

The New Zealand Shipping Co.
LIMITED

213 Board of Trade Building, Montreal

ONTARIO.

Balaclava, Ont.

Harry Richards, Dacre Post Office, Ont., is preparing to rebuild his sawmill, which was recently destroyed by fire.

Chatham, Ont.

A by-law granting concessions to the Dominion Sugar Company will be submitted to the ratepayers.

A by-law will be submitted to the ratepayers at the January elections regarding concessions to the Gray-Dort Automobile Co.

Fergus, Ont.

A by-law will be submitted to the ratepayers by the Town Council to loan the Superior Barn Equipment Company \$10,000 for the establishment of a factory, and if the by-law is passed the company will spend \$7,500 on remodelling a building which they have purchased.

Fort Erie, Ont.

The International Safe & Register Company contemplate the erection of an addition to their factory shortly.

Georgetown, Ont.

The Glass Garden Builders, Limited, Toronto, are about to start work on the erection of a factory, estimated to cost \$25,000.

Hamilton, Ont.

The Proctor Gamble Company have commenced work on the erection of an addition to their factory.

The Dominion Steel Castings Company have commenced alterations to their premises, estimated to cost \$10,000.

Plans have been prepared for an addition to the factory of the Proctor & Gamble Company, soap manufacturers.

The Tallman Brass Company are making an extension to their plant.

The Acme Stamping & Tool Co., Limited, will make an extension to their plant to cost \$3,000.

Kincardine, Ont.

If the by-law to grant tax exemption for a period of ten years to the Ontario People's Salt & Soda Company, Limited, is passed at the January election, the company will make additions to their plant estimated to cost \$10,000.

Listowel, Ont.

A by-law will be submitted to the ratepayers on January 3rd to authorize the loan of \$12,000 to a company for the erection of a boot and shoe factory.

London, Ont.

Copp Brothers have had plans prepared for storehouses.

Peterborough, Ont.

The premises formerly occupied by the Canadian Cordage Company will be taken over by the Peterborough Metal Products Company, and machinery will be installed for the manufacture of metal products.

Petrolia, Ont.

On January 3, the ratepayers will vote upon a by-law for \$21,500 to assist the Western Sugar Refining Company, which will locate here if the amount is granted. A by-law

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for \$25,000 will also be submitted for the vote of the rate-payers to raise \$25,000 to purchase stock in the company.

Port Stanley, Ont.

The London & Port Stanley Railway Board are considering the erection of four comfort stations.

Prescott, Ont.

A stone building has been acquired by the Newell Mfg. Company, Ogdensburg, N.Y. Work will include the installation of a complete heating plant and an electric elevator.

St. Catharines, Ont.

The Maple Leaf Milling Company's flour mill was destroyed by fire on December 7th.

It is expected that the new factory of the Marathon Rubber & Tire Company will be in operation by the first week in March.

Toronto, Ont.

The general contract for the erection of a factory at Davenport Road and Light Court Street for the McCallum Company, 44 Dupont Street, has been awarded to A. J. Peppiatt, Wells Hill Avenue.

The factory of T. Crowley & Co., manufacturers of picture frames, was badly damaged by fire on December 12th.

Work has been started on a further addition to the plant of the Double Ball Bearing Company.

Wallaceburg, Ont.

An addition will be made to the plant of the Wallaceburg Brick Company, and machinery for the manufacture of tile will be installed.

Welland, Ont.

An addition is being built to the plant of the Canadian Steel Foundries.

At an approximate cost of \$25,000 the Standard Steel Construction Company are building an addition to the plant of the Canada Forge Company.

The Canada Forge Company will build an extension to their plant. The cost is estimated at \$20,000.

QUEBEC.

Lachine, Que.

A brass foundry is being built by the Dominion Bridge Company at a cost of \$20,000.

Montreal, Que.

Work has been started on the erection of a factory for the Steel Company of Canada, 1272 Notre Dame St. West.

Plans are being prepared for a foundry to be erected for the Williams Manufacturing Company.

Quebec, Que.

Fire damaged the Eastern Canada Steel Company's plant. The damage, which is said to be around \$100,000, is covered by insurance.

Public Service Corporation have started work on the erection of a transformer station.

Sault Au Recollet, Que.

J. R. Walker, 35 Common Street, Montreal, are repairing their cardboard mill, but will not rebuild their paper mill until the spring.

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REPLACING CONTINENTAL SUPPLIES.

Sheffield (England) University is starting a glass making research department, with classes at the university and at Castleford, Knottingly, Barnsley, and Wexborough. The 8,000 glassworkers in Yorkshire who, prior to the war, were turning out only cheap glass bottles, are taking up fine glassware production.

EDISON AND DYE INDUSTRY.

A recent wise saying of Edison: "Make democracy efficient—so far only autocracy is efficient." Edison says that the United States can make all the principal dyes and just as good as they are made in any country. He has developed a benzol producing plant, and this is the starting point of all

dyes, but to build up a home industry he would have congress pass a law preventing the dumping in this country of dyes sold lower than they are sold in Germany.

TRADE REPORT FROM AUSTRALIA.

The Sydney, Australia, Chamber of Commerce has issued its annual report, a copy of which is just to hand. The report gives a resume of the work which has been before the Chamber of Commerce during the past year, and covers a wide and interesting field.

In addition to the report proper, the book contains interesting statistical information bearing on Australasian trade. It should amply fulfill the intentions of its compilers, in increasing the trade and commerce of Australia.

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THE REASON FOR ACCIDENTS, AND HOW THEY SHOULD BE AVERTED. EXAMPLES FROM A STEEL PLANT.

Description: Ladleman had finger lacerated by gears on ladle. They had been repaired and placed in service without replacing the guards.

Suggestion: Proper inspection with written report might prevent such an accident.

Description: Carpenter, while working in boiler house, was struck on chin when gauge glass exploded.

Suggestion: Safety Rules require that all boiler gauge glasses be protected. Why the accident?

Description: Craneman was walking through mill when he was struck in eye by chip of babbitt from bearing being chipped.

Suggestion: The use of a portable burlap shield would have prevented this accident.

Description: A blacksmith's helper was cutting heads off rivets under steam hammer when one stuck in die, and while attempting to remove it with his fingers, the hammer came down catching his hand. Had foot on treadle and must have inadvertently tripped the hammer.

Suggestion: Observance of rule against putting hands under hammer. Tongs should have been used.

Description: A machinist was making repairs on top of a machine while carpenter gang was hoisting a heavy timber over him to be used on the same machine. The tackle slipped and the piece of timber dropped, striking machinist.

Suggestion: First, strict observance of the rule forbidding men working directly under material being hoisted. Second, exercise of great care in adjusting hoisting tackle.

Description: Millwrights were handling jack shaft by crane through mill, when chain on shaft broke, striking a laborer.

Suggestion: Cable slings should have been used instead of chains. The utmost care should be taken when moving material through mills to see that men working underneath have proper warning.

Description: Narrow gauge switchman had finger caught and fractured between lever of switch and cab of engine while throwing switch.

Suggestion: The Central Safety Committee has recommended that all switches be arranged to throw parallel to tracks. Why the accident?

Description: Machinist, although supplied with goggles neglected to wear them because of small amount of chipping to be done, had his eye injured.

Suggestion: In this case, experience was a bitter teacher.

HAS ORGANIZED A COMPANY.

H. B. McCarthy, Toronto, formerly operating under his own name, is now manufacturing leather laces under the firm name of H. B. McCarthy Co., Ltd.

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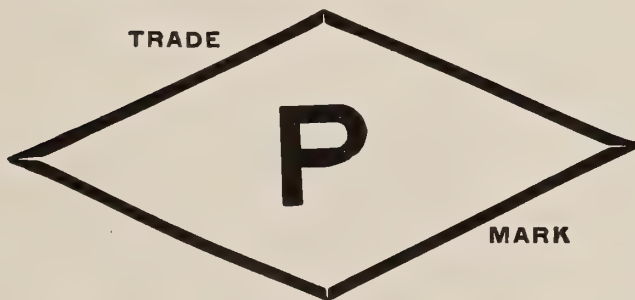
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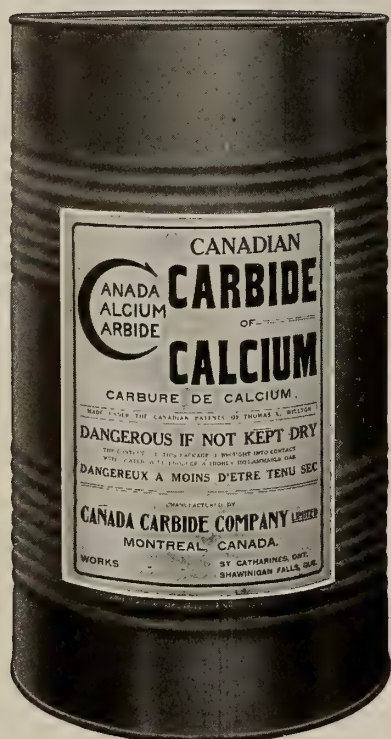
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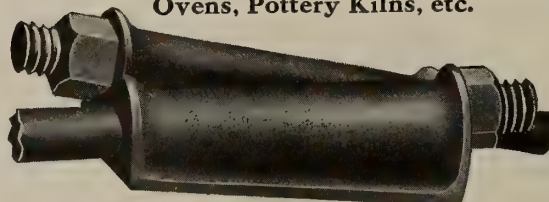
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BUYERS' GUIDE TO CANADIAN MANUFACTURES

A List of Articles Which Will Enable the Purchaser to Know the Manufacturers of Made-in-Canada Goods. For Rates for Insertion in this Department Write to the Advertising Manager of Industrial Canada, Toronto.

ABRASIVE MATERIALS

- *Canadian Hart Wheels, Ltd., Hamilton, Ont.
- *Dominion Abrasive Wheel Co., New Toronto, Ont.

ACCOUNT BOOKS

- *The Brown Bros., Ltd., Toronto.

ACCOUNTING FORMS

- Business Systems, Ltd., Toronto.

ACETYLENE GAS BURNERS

- Economic Acetylene Burner Co., Toronto.

ACIDS

- *The Grasselli Chemical Co., Ltd., Toronto.
- *The Nichols Chemical Co., Ltd., Montreal.

ADJUSTARODS

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ADVERTISING NOVELTIES

- Lawson & Jones, Ltd., London, Ont.

AERATED BEVERAGES

- Charles Gurr & Co., Ltd., Montreal, Que.
- J. J. McLaughlin, Ltd., Toronto.

AIR WASHERS

- *The Canadian Sirocco Co., Windsor, Ont.

ALCOHOL

- The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.
- *Hiram Walker & Sons, Ltd., Walkerville, Ont.

ALE

- E. L. Drewry, Winnipeg, Man.

ALUMINUM

- *Northern Aluminum Co., Ltd., 1305 Traders Bank, Toronto.

ALUMINUM CASTINGS

- *Tallman Brass & Metal Co., Hamilton, Ont.

AMMONIA

- Canadian Ammonia Co., Ltd., Toronto.

ANGLE BARS

- *The Steel Company of Canada, Limited, Hamilton.

ARC AND INCANDESCENT HEADLIGHTS (Electric)

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ARCHITECTS

- *T. Pringle & Sons, Montreal.

ASBESTOS:

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEATHING:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEET AND PISTON PACKINGS:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS STEAM PIPE AND BOILER COVERINGS:

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS TEXTILES:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ATHLETIC UNDERWEAR

- Williams, Green & Rome Co., Ltd., Berlin, Ont.

AUTOMOBILE ACCESSORIES,

- *Northern Electric Co., Limited, Montreal.
- *Tallman Brass & Metal Co., Hamilton.

AUTOMOBILE PARTS

- *Dominion Stamping Co., Walkerville, Ont.

AWNING CORD, cotton

- Hamilton Cotton Co., Hamilton, Ont.

AWNINGS

- *Smart-Woods, Ltd., Montreal.

AXLES

- Canada Forge Co., Ltd., Welland, Ont.
- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

AXLES, carriage and automobile

- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

BABBITT METAL

- Alonzo W. Spooner, Limited, Port Hope, Ont.

*The Canada Metal Co., Toronto.

*Tallman Brass & Metal Co., Hamilton.

BACON

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BAGS

- *Scythes & Co., Ltd., Toronto.
- *Smart-Woods, Ltd., Montreal.

BAGS, Cotton

- The Canadian Bag Co., Ltd., Montreal, Que.

BAGS, jute

- The Canadian Bag Co., Ltd., Montreal, Que.

- *Scythes & Co., Ltd., Toronto.

BAGS, travelling

- J. Eveleigh & Co., Ltd., Montreal, Que.

- Lamontagne, Ltd., Montreal, Que.

- The M. Langmuir Mfg. Co., of Toronto, Ltd., Toronto.

BAKING JAPAN

- *Berry Bros., Ltd., Winnipeg, Man.

BAND RESAWS:

- *Berlin Machine Works, Ltd., Hamilton.

BANK AND OFFICE RAILINGS

- *The Geo. B. Meadows, Toronto Wire, Iron & Brass Works Co., Ltd., Toronto.

- *Canada Wire and Iron Works, Hamilton.

BANK FITTINGS

- The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

BANK RAILINGS AND CAGES:

- *Canada Wire and Iron Goods Co., Hamilton.

- *Dennis Wire & Iron Works Co., London.

BANK SIGNS AND FITTINGS

- *Tallman Brass & Metal Co., Hamilton.

BARB, iron

- London Rolling Mill Co., Ltd., London, Ont.

BARB, steel

- London Rolling Mill Co., Ltd., London, Ont.

BASEBALL GOODS

- A. J. Reach Co., Brantford, Ont.

BATHS, enamelled

- Amherst Foundry Co., Ltd., Amherst, N.S.

BATTERIES, dry

- The Canadian National Carbon Co., Ltd., Toronto.

- Canadian Carbon Company, Ltd., Toronto.

BEARINGS:

- *The Chapman Double Ball Bearing Co., Ltd., Toronto.

- The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS, bronze

- *Tallman Brass & Metal Co., Hamilton, Ont.

- *Dodge Mfg. Co., Ltd., Toronto.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEDS, camp folding

- *Otterville Mfg. Co., Ltd., Otterville, Ont.

- *Smart-Woods, Ltd., Montreal.

BEEF

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BEER

- E. L. Drewry, Winnipeg, Man.

BELTING, chains.

- *Dodge Mfg. Co., Ltd., Toronto.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- *Jeffrey Mfg. Co., Montreal, Que.

BELTING, Elevator

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

BELTING, leather

- The Beardsmore Belting Co., Ltd., Toronto.

- *J. L. Goodhue & Co., Danville, P.Q.

- *Sadler & Howarth, Montreal.

- *The D. K. McLaren Belting Co., Ltd., Montreal.

- *The J. C. McLaren Belting Co., Ltd., Montreal.

BELTING, rubber

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

- *Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

- *Gutta Percha & Rubber, Limited.

BENT GOODS

- The Crown Lumber Co., Woodstock, Ont.

BICYCLES AND ACCESSORIES

- *Canada Cycle and Motor Co., Ltd., Toronto.

BILLIARD BALLS

- Samuel May & Co., Toronto.

BINDERS, loose leaf

- Business Systems, Ltd., Toronto.

BISCUITS

- The Montreal Biscuit Co., Montreal, Que.

BLACK SHEETS:

- *A. C. Leslie & Co., Montreal.

BLANK BOOKS:

- Business Systems, Ltd., Toronto.

- *Morton, Philips & Co., Montreal.

BLANKETS

- Slingsby Mfg. Co., Ltd., Brantford Ont.

- J. Walsham & Son, Limited, Bolton, Ontario.

BLANKETS, horse

- Slingsby Mfg. Co., Ltd., Brantford Ont.

- *Smart-Woods, Ltd., Montreal.

- J. Walsham & Son Limited, Bolton, Ont.

BLASTING ACCESSORIES

- Canadian Explosives, Ltd., Montreal, Que.

BLEACHING POWDER

- Canadian Salt Co., Ltd., Windsor Ont.

BLOWERS:

- *Sheldons, Ltd., Galt.

BOATS OF ALL KINDS

- Peterboro Canoe Co., Ltd., Peterboro, Ont.

BOILER COMPOUND and OILS

- *Canadian H. W. Johns-Manville Co., Toronto.

- Electric Boiler Compound Co., Ltd Guelph, Ont.

BOILERS.

- *M. Beatty & Sons, Ltd., Welland, Ont.

- *Goldie & McCulloch Co., Ltd., Galt, Ont.

- John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

- *Polson Iron Works, Ltd., Toronto

- J. & R. Weir, Montreal, Que.

- Taylor-Forbes Co., Ltd., Guelph Ont.

- *Jenckes Machine Co., Sherbrooke

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS, heating:

- *The Goldie & McCulloch Co., Ltd Galt.

BOILERS, hot water or steam

- Warden King, Ltd., Montreal, Que

BOILERS, steam.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- Steel and Radiation Ltd., Toronto.

- Warden King, Ltd., Montreal, Que

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS, steam and brass work:

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILERS AND TANKS

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- *The Watrous Engine Works Co., Ltd., Brantford.

BOILER FEED PUMPS.

- *The Bawden Machine Co., Limited, Toronto.

BOILER STANDS

- Antes Foundry Ltd., Toronto.

BOLSTERS

- *Canadian Car & Foundry Co., Ltd., Montreal, Que.

BOLTS:

- *The National Acme Mfg Co., Montreal.

BOLTS AND NUTS

- *The Canadian Tube & Iron Co., Ltd., Montreal, Que.

- *The Steel Company of Canada, Limited, Hamilton.

- *Starr Mfg. Co., Ltd., Dartmouth, N.S.

BOOKBINDERS

- R. G. McLean, Toronto.

- *The Brown Bros., Ltd., Toronto.

BOOKCASES, sectional (Gunn)

- The George McLagan Furniture Co., Ltd., Stratford, Ont.

BOOKLETS

- Stone Limited, Toronto.

- R. G. McLean, Toronto.

BOOKS, blank

- *The Brown Bros., Ltd., Toronto.

BOOTS AND SHOES,

- Ames-Holden-McCreedy, Ltd., Montreal, Que.

- J. Leckie Co., Ltd.

- The John Ritchie Co., Ltd., Quebec, Que.

BOWLING ALLEYS

- Samuel May & Co., Toronto.

BOXES, cellular board:

- *The Thompson & Norris Co. of Canada, Ltd., Niagara Falls.

BOXES, rattle and soap

- The Arlington Co. of Canada, Ltd., Toronto.

BOXES AND SHOOKS, wooden

- The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

BOXES, wooden

- G. & J. Esplen, Montreal, Que.

- Barchard & Co., Ltd., Toronto.

BRAIDS AND TRIMMINGS

- The Moulton Mfg. Co., Ltd., Montreal.

BRAKE SHOES

- *Canadian Hart Wheels, Ltd., Hamilton, Ont.

BRANDS, burning</

BRASS PLATES

Geo. Booth & Son, Toronto.
*Tallman Brass & Metal Co., Hamilton.

BRASS RODS, SHEETS AND PLATES

*Brown's Copper and Brass Rolling Mills, Ltd., New Toronto.

BRASS RODS, Sheets and Tubing:

*Tallman Brass & Metal Co., Hamilton.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

BRASS SIGNS AND MEMORIALS

*Tallman Brass & Metal Co., Hamilton.

BRASS TUBING, seamless

Canadian Seamless Wire Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.

BRASS WIRE

Canadian Seamless Wire Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.

BRASS WORK, church.

Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS WORK, special

Bawden Machine Co., Ltd., Toronto.
*Tallman Brass & Metal Co., Hamilton.

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

*The Watrous Engine Works Co., Ltd., Brantford.

BRICK

National Brick Co. of Laprairie, Laprairie, P.Q.
Port Credit Brick Co., Port Credit, Ont.

BRICK, enamel

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, pressed

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, rubbing

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

BRICK, sewer

National Brick Co. of Laprairie, Laprairie, P.Q.

BRIDGES, Railway and Highway

Dominion Bridge Co., Montreal.
*Hamilton Bridge Works Co., Ltd., Hamilton.
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*The Structural Steel Co., Ltd., Montreal.

BRINE PUMPS.

*The Bawden Machine Co., Limited, Toronto.

BROOMS

Simms, T. S., & Co., Ltd., St. John, N.B.
Stevens-Hepner Co., Ltd., Port Elgin, Ont.
*Boeckh Bros Co., Toronto.

BRUSHES:

*Boeckh Bros. Co., Toronto.
Simms, T. S., & Co., Ltd., St. John, N.B.
Stevens-Hepner Co., Ltd., Port Elgin, Ont.

BRUSHES, carbon

Canadian National Carbon Co., Ltd., Toronto.

BUCKET TANKS

*The General Fire Equipment Co., Ltd., Toronto, Ont.

BUCKLES, shoe and coat
Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

BUILDING

Bathurst Lumber Co., Ltd., Bathurst, N.B.

BUILDING BLOCKS, vitrified, salt glazed

Standard Clay Products, Ltd., St. Johns, Que.

BUILDING FELT and PAPER:

*Canadian H. W. Johns-Manville Co., Toronto.
*Eureka Mineral Wool & Asbestos Co., Toronto.
*Paterson Manufacturing Company, Toronto and Montreal.

BUILDING PAPERS

*Bird & Son, Hamilton, Ont.

BUILDERS, ship

*Polson Iron Works, Ltd., Toronto.
J. & R. Weir, Montreal, Que.

BURLAPS

The Canadian Bag Co., Ltd., Montreal, Que.
*Scythes & Co., Ltd., Toronto.
*Smart-Woods, Ltd., Montreal.

BURLAPS, decorative
Dominion Oil Cloth Co., Ltd., Montreal, Que.

CABINETS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CABLE, Copper and galvanized:

*The Steel Co. of Canada, Ltd., Hamilton.

CABLES, transmission and tele-

phones:
*Eugene F. Phillips Electrical Works, Ltd., Montreal.

CABLES, Transmission and Cable:

*Northern Electric Co., Limited, Montreal.

CABLES, wire

The Dominion Wire Rope Co., Ltd., Montreal.
*The B. Greening Wire Co., Ltd., Hamilton.

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Rolph & Clark, Ltd., Toronto.
Lawson & Jones, Ltd., London, Ont.
Stone Limited, Toronto.

CAMERAS

Canadian Kodak Co., Ltd., Toronto.

CAMPERS' OUTFITTERS

Slingsby Mfg. Co., Ltd., Brantford, Ont.

CANOEES

Peterboro Canoe Co., Ltd., Peterboro, Ont.

CANS, baking powder, etc.

American Can. Co., Montreal and Hamilton.
A. R. Whittall, Montreal.

CANS, fruit

American Can Co., Montreal and Hamilton.

A. R. Whittall, Montreal.

CANS, tin

A. R. Whittall, Montreal, Que.
American Can Co., Montreal and Hamilton.

CANS, iron, lead and putty

A. R. Whittall, Montreal.

CANVAS

*Scythes & Co., Ltd., Toronto.
*Smart-Woods, Ltd., Montreal.

CAPS, cloth

John W. Peck & Co., Ltd., Montreal, Que.

CARBIDE

*Canada Carbide Co., Ltd., Montreal.

CARBON BRUSHES

Canadian Carbon Co., Ltd., Toronto.

CARBON PRODUCTS

Canadian Carbon Co., Ltd., Toronto.

CARBONS, arc light

Canadian Carbon Co., Ltd., Toronto.
The Canadian National Carbon Co., Ltd.

CARBONS, flame

Canadian Carbon Co., Ltd., Toronto.

CARBONIC ACID GAS

Canadian Carbonate Company, Limited, Montreal.

CARBIDE OF CALCIUM

Canada Carbide Co., Ltd., Montreal, Que.

CARDBOARD

Bathurst Lumber Co., Ltd., Bathurst, N.B.

CARPETS AND RUGS

Toronto Carpet Mfg. Co., Ltd., Toronto.

CARPETS AND RUGS, Axminster

and ingrain
Toronto Carpet Mfg. Co., Ltd., Toronto.

CARPETS AND RUGS, Brussels

and Wilton
Toronto Carpet Mfg. Co., Ltd., Toronto.

CARPET YARNs, worsted and

wool
Toronto Carpet Mfg. Co., Ltd., Toronto.

CARRIAGES, baby, etc.

Canada Furniture Mfrs., Ltd., Woodstock, Ont.

CARRIERS.

*Richard-Wilcox Canadian Co., Limited, London, Ont.

CARRIERS, box and barrel

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

CARRIERS, brick

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

*Jeffrey Mfg. Co., Montreal, Que.

*Richards-Wilcox Canadian Co., Ltd., London, Ont.

CARS

*Canadian Car & Foundry Co., Ltd., Montreal, Que.

*National Steel Car Co., Limited, Hamilton.

CARS, industrial:

*Sheldons, Ltd., Galt.

CARTONS, lithographed

Harris Lithographing Co., Toronto.

CASTINGS:

*Tallman Brass & Metal Co., Hamilton.

CASTINGS, aluminum:

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

CASTINGS, brass:

*Tallman Brass & Metal Co., Hamilton.

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

CASTINGS, brass and bronze:

*Tallman Brass & Metal Co., Hamilton.

CASTINGS, grey iron.

*Dodge Mfg. Co., Toronto.

*Canadian Car & Foundry Co., Ltd., Montreal, Que.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*The Record Foundry and Machine Co., Moncton, N.B.

Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

The Western Steel & Iron Co., Ltd., Winnipeg, Man.

CASTINGS, malleable iron:

*Galt Malleable Iron Co., Ltd., Galt, Ont.

*Pratt & Letchworth Co., Brantford, Ont.

CASTINGS, steel:

*Canadian Steel Foundries, Ltd., Montreal.

*Dominion Steel Foundry Co., Ltd., Hamilton, Ont.

Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

CATALOGUE MAKERS

Grip, Ltd., Toronto.

R. G. McLean, Toronto.

CAUSTIC SODA

Canadian Salt Co., Ltd., Windsor, Ont.

CEMENT GUNS

Steel and Radiation, Ltd., Toronto.

CHAIRS, assembly hall

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, folding

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, rattan and upholstered

Imperial Rattan Co., Ltd., Stratford, Ont.

CHEMICALS

*The Grasselli Chemical Co., Ltd., Toronto.

*The Nichols Chemical Co., Ltd., Montreal.

CHEMICAL LABORATORY APPARATUS

The Geo. M. Hendry Co., Ltd., Toronto, Ont.

CHICLETS AND CHEWING GUM

Canadian Chewing Gum Co., Ltd., Toronto.

CIGARS

Ed Youngheart & Co., Ltd., Montreal, Que.

CIGARETTES AND TOBACCO

Philip Morris & Co., Ltd., Montreal, Que.

CIRCULAR CUTTERS, solid steel

The Peter Hay Knife Co., Ltd., Galt, Ont.

CLAM SHELL BUCKETS

*M. Beatty & Sons, Ltd., Welland, Ont.

CLOCKS AND CLOCK MOVEMENTS

The Arthur Pequegnat Clock Co., Berlin, Ont.

CLOCKS, TIME

*International Time Recording Co. of Canada, Ltd., Toronto.

CLOCKS, WATCHMEN'S

*The General Fire Equipment Co., Ltd., Toronto, Ont.

CLOSET SEATS

*Canadian H. W. Johns-Manville Co., Toronto.

*Goderich Organ Co., Goderich, Ont.

CLOTHING

John W. Peck & Co., Ltd., Montreal, Que.

MacKenzie & Co., Ottawa, Canada.

*Smart-Woods, Ltd., Montreal, Que.

CLOTHING, leather and sheepskin lined coats

A. R. Clarke & Co., Ltd., Toronto.

CLOTHING, Mackinaw

The Carss Mackinaw Clothing Co., Ltd., Orillia, Ont.

CLOTHES LINES, cotton

Hamilton Cotton Co., Hamilton, Ont.

CLUTCHES.

*Dodge Mfg. Co., Ltd., Toronto.

CLUTCHES, conveyors.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

COAL

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

Standard Fuel Co., Toronto.

COBALT OXIDE

The Coniagas Reduction Co., Ltd., St. Catharines, Ont.

COCOA AND CHOCOLATE

PREPARATIONS
Walter Baker & Co., of Canada, Ltd., Montreal, Que.

COFFEE

S. H. Ewing & Sons, Montreal, Que.

COFFEE IMPORTERS, Roasters and Manufacturers

O. H. Cochrane & Co., Ottawa, Ont.

COLD DRAWN SCREW STEEL:

*Canadian Drawn Steel Co., Ltd., Hamilton.

*Union Drawn Steel Co., Ltd., Hamilton, Ont.

SOLD DRAWN SHAPES, flats, squares and hexagons:

*The Canadian Drawn Steel Co., Ltd., Hamilton.

*Union Drawn Steel Co., Ltd., Hamilton, Ont.

COLD STORAGE DOORS

John Hillock & Co., Ltd., Toronto.

COLLAR BUTTONS

The Arlington Co., of Canada, Ltd., Toronto.

COLLARS

The Standard Shirt Co., Ltd., Montreal, Que.

COLLARS, coated linen

Parsons & Parsons Canadian Co., Hamilton, Ont.

COLLARS AND CUFFS waterproof

Williams, Greene & Rome, Berlin, Ont.

COLORES

Brandram-Henderson Ltd., Montreal, Que.

A. Ramsay & Son Co., Montreal, Que.

Sherwin Williams Co. of Canada, Ltd., Montreal, Que.

COMBS, fine dressing and name

The Arlington Co. of Canada, Ltd., Toronto.

COMMERCIAL STATIONERS

Rolph & Clark, Ltd., Toronto.

COMMERCIAL STATIONERY:

*Brown Bros., Ltd., Toronto.

*Morton, Phillips & Co., Montreal.

CONCENTRATORS:

*Jenckes Machine Co., Sherbrooke.

CONCRETE COATINGS, paints, etc.

The Imperial Varnish & Color Co., Ltd., Toronto.

CONDUITS FOR INTERIOR

WIRING
*Conduits Company, Ltd., Toronto.

CONDUITS FOR ELECTRICAL INSTALLATIONS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CONFECTIONERY

Ganong Bros., Ltd., St. Stephens, N.B.

Moira, Limited, Halifax, N.S.

The Montreal Biscuit Co., Montreal, Que.

CONTRACTORS' PLANT

The Western Steel & Iron Co., Ltd., Winnipeg, Man.

*M. Beatty & Sons, Ltd., Welland, Ont.

CONVEYING SYSTEMS

*Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

CONVEYORS:

*Dodge Mfg. Co., Ltd., Toronto.

*Jenckes Machine Co., Sherbrooke.

COOLING APPARATUS

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

COPPER:

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

COPPER SHEETS AND PLATES

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

*Tallman Brass & Metal Co., Hamilton.

COPPERSMITHS

*The Booth-Coulter Copper and Brass Co., Ltd., Toronto.

COPPER TUBING, seamless

Canadian Seamless Wire Co., Ltd., Toronto.

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

COPPERWARE AND LANTERNS

Sheet Metal Products Co. of Canada, Ltd., Toronto.

COPPER WIRE

Canadian Seamless Wire Co., Ltd., Toronto.

CORKS

S. H. Ewing & Sons, Montreal, Que.

CORK CARPET

Dominion Oil Cloth Co., Ltd., Montreal, Que.

CORRUGATED BOXES:

*Hinde & Dauch Paper Co., Toronto.

*Martin Corrugated Paper & Box Co., Ltd., Toronto.

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORRUGATED PAPER:

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORSETS

Dominion Corset Co., Quebec, Que.

COTTONS

*Dominion Textile Co., Ltd., Montreal.

*Montreal Cottons, Ltd., Valleyfield, P.Q.

COTTONADES

Hamilton Cotton Co., Hamilton, Ont.

COUPLERS

*Canadian Steel Foundries, Ltd., Welland, Ont.

CRANES

*Northern Crane Works, Walkerville.

COUPLINGS:

*Dodge Mfg. Co., Ltd., Toronto.

CRANKSHAFTS

Canada Forge Co., Ltd., Welland, Ont.

CREAM CHEESE, Ingersoll

The Ingersoll Packing Co., Ltd., Ingersoll, Ont.

CREAM SEPARATORS AND MILK CLARIFIERS

De Laval Dairy Supply Co., Ltd., Montreal, Que.

CREAMERY AND CHEESE FACTORY MACHINERY AND SUPPLIES

De Laval Dairy Supply Co., Peterboro, Ont.

CREOSOTED MATERIALS:

*The Dominion Creosoting Co., Ltd., Vancouver, B.C.

*Paterson Manufacturing Company, Toronto and Montreal.

CRUSHED STONE

The Hagersville Contracting Co., Ltd., Hagersville, Ont.

CRUSHING ROLLS:

*Jenckes Machine Co., Sherbrooke.

CUES

Samuel May & Co., Toronto.

CUPOLAS,

*Sheldons, Ltd., Galt.

Northern Crane Works, Limited, Walkerville.

CUPS, presentation

Standard Silver Co., Toronto.

CUPS, grease and oil

*The Canadian Winkley Co., Ltd., Windsor, Ont.

CURLED HAIR

Delany & Pettit, Ltd., Toronto.

CURTAINS, chenille

Hamilton Cotton Co., Hamilton, Ont.

CUTLERY

Standard Silver Co., Toronto.

Canadian Wm. A. Rogers, Ltd.

DENIMS

Hamilton Cotton Co., Hamilton, Ont.

DERAILS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

DESIGNERS

Ontario Engraving Co., Hamilton, Ont.

DESIGNERS and PRINTERS OF BOOKLETS, ETC.

Grip, Ltd., Toronto.

DINING ROOM SUITES

The George McLagan Furniture Co., Limited, Stratford, Ont.

DIES

*Butterfield & Co., Rock Island, P.Q.

DISINFECTING APPARATUS

Spramotor Co., London, Ont.

DOOR HANGERS

*Richards Wilcox Canadian Co., Ltd., London, Ont.

DRAPEY AND UPHOLSTERY GOODS

Daly & Morin, Montreal, Que.

DEEDGES

*M. Beatty & Sons, Ltd., Welland, Ont.

DRESSING, belt

Sadler & Haworth, Montreal, Que.

DRESS AND CLOAK TRIMMINGS

J. Henry Peters Co., 1 Mining St., Toronto.

DRILLS:

*John Morrow Screw & Nut Co., Ltd., Ingersoll.

DRIFT BOLTS OR SPIKES

London Rolling Mill Co., Ltd., London, Ont.

DROP FORGINGS:

*Canadian Billings & Spencer, Ltd., Welland.

DRY CELLS, electric

Canadian Carbon Co., Ltd., Toronto.

DRY COLORS

P. D. Dods & Co., Ltd., Montreal, Que.

The Imperial Varnish & Color Co., Ltd., Toronto.

R. C. Jamieson & Co., Ltd., Montreal, Que.

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

DRY KILN EQUIPMENT

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

DUMB WAITERS

Turnbull Elevator Mfg. Co., Toronto.

DURABLE WIRE ROPE

The Dominion Wire Rope Co., Ltd., Montreal.

DYNAMITE

Canadian Explosives Ltd., Montreal, Que.

DYNAMOS,

Consolidated Electric Co., Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*The Canadian Crocker-Wheeler Co., Limited St. Catharines.

*Jones & Moore Electric Co., Ltd., Toronto.

EIDERDOWN

Galt Knitting Co., Ltd., Galt.

ELECTRIC APPLIANCES.

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines.

*Canadian Westinghouse Co., Ltd., Hamilton.

ELECTRICAL COMPOUNDS

Standard Paint Co. of Canada, Ltd., Montreal, Que.

ELECTRICAL AND GAS FIXTURES

The Garth Co., Montreal, Que.

The James Morrison Brass Mfg. Co., Ltd., Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

ELECTRIC FURNACES

*Canadian Hoskins, Ltd., Walkerville.

ELECTRIC LAMPS.

*Packard Electric Co., Ltd., Toronto.

ELECTRIC PLATE WARE

Roden Bros., Ltd., Toronto.

ELECTRIC BATTERIES

Canadian Carbon Co., Ltd., Toronto.

ELECTROTYPING

Central Press Agency, Toronto.

ELECTRICAL SUPPLIES,

*Canadian Westinghouse Co., Ltd., Hamilton.

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Northern Electric Co., Limited, Montreal.

ELECTRO-SILVER PLATED WARE

Standard Silver Co., Toronto.

ELEVATORS:

*Jenckes Machine Co., Sherbrooke.

Turnbull Elevator Mfg. Co., Toronto.

*The Waterous Engine Works Co., Ltd., Brantford.

Northern Crane Works, Limited, Walkerville.

ELEVATORS FOR ALL PURPOSES

*The Waterous Engine Works Co., Ltd., Brantford.

ELEVATOR GATES AND DOORS

Turnbull Elevator Mfg. Co., Ltd., Toronto.

ELEVATOR GUARDS

*The Geo. B. Meadows, Toronto.

Iron and Brass Goods Works Co., Ltd., Toronto.

*Canada Wire and Iron Works, Hamilton.

ELEVATORS, hydraulic and electric

John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

EMERY DRESSERS and STANDS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY GRINDERS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEELS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEEL GUARDS

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

EMERY WHEEL Safety Flanges

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

ENAMELS

R. C. Jamieson & Co., Ltd., Montreal, Que.

ENAMEL MANUFACTURERS AND DECORATORS

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

ENAMEL AND TIN WARE

McClary Mfg. Co., London, Ont.

ENGINES

*E. Leonard & Sons, London.

*Goldie & McCulloch Co., Ltd., Galt, Ont.

*J. & R. Weir, Montreal, Que.

*Polson Iron Works, Ltd., Toronto.

*Sheldons, Ltd., Galt.

*The Waterous Engine Works Co., Ltd., Brantford.

ENGINES, gas and gasoline

Goold-Shapley-Muir Co., Ltd., Brantford, Ont.

*Massey-Harris Co., Ltd., Toronto.

ENGINES, gasoline tractor

plowing and threshing

Sawyer-Massey Co., Ltd., Hamilton, Ont.

ENGINES, hoisting

*M. Beatty & Sons, Welland.

*Waterous Engine Works Co., Ltd., Brantford.

ENGINES, steam plowing and threshing

Sawyer-Massey Co., Ltd., Hamilton, Ont.

ENGRAVERS

Grip, Ltd., Toronto.

Ontario Engraving Co., Hamilton, Ont.

Rolph & Clark, Ltd., Toronto.

Stons, Limited, Toronto.

ENGRAVERS, half-tone

Grip, Ltd., Toronto.

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS, wood

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS AND PRINTERS, steel plate

American Bank Note Co., Ottawa, Ont.

ENGRAVERS AND PRINTERS, banknote

American Bank Note Co., Ottawa, Ont.

ENGRAVING:

*J. L. Jones Engraving Co., Toronto.

ENGRAVING, copper and steel plate

Pritchard-Andrews Co., of Ottawa, Ltd., Ottawa.

ENSILAGE AND STRAW CUTTERS

J. Fleury's Sons, Aurora, Ont.

ENVELOPES

Barber-Ellis Co., Ltd., Toronto.

Canada Envelope Co., Montreal, Que.

ENVELOPES, Transos,

Business Systems, Ltd., Toronto.

EXCELSIOR

*Delany and Pettit, Ltd., Toronto, Ont.

EXCELSIOR PADS

*Delany and Pettit, Ltd., Toronto, Ont.

Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

EXPERTS IN PATENT CAUSES

Ridout & Maybee, Toronto.

EXPLOSIVES, high

Canadian Explosives Ltd., Montreal, Que.

FACE PLATE JAWS

Ker & Goodwin, Brantford, Ont.

FACTORY SUPPLIES, cheese and creamery

De Laval Dairy Supply Co., Ltd., Montreal, Que.

J. Henry Peters Co., 1 Mining St., Toronto.

FANS:

*The Canadian Sirocco Co., Windsor, Ont.

*Sheldons, Ltd., Galt.

FASTENERS, belt

*Sadler & Haworth, Montreal, Que.

FENCES and GATES:

*Dennis Wire & Iron Works Co., London.

*Canada Wire and Iron Works, Hamilton.

FENCING AND GATES, woven wire

Banwell Hoxie Wire Fence Co., Hamilton, Ont.

*Canada Wire and Iron Goods Co., Hamilton.

FENCING, wire

The Great West Wire Fence Co., Ltd., Winnipeg, Man.

O. H. Johnson & Sons, Ltd., Montreal, Que.

FIBRE PAILS:

*The E. B. Eddy Co., Ltd., Hull.

FILES

Henry Disston & Sons, Ltd., Toronto.

*The Nicholson File Co., Port Hope, Ont.

FIRE ALARMS,

*Northern Electric Co., Limited, Montreal.

FIRE DOOR HARDWARE

*Richards Wilcox Canadian Co., Ltd., London, Ont.

FIRE ENGINES:

*Waterous Engine Works Co., Ltd., Brantford.

FIRE ESCAPES:

*Canada Wire and Iron Goods Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

FIRE EXTINGUISHERS

*The Booth-Coulter Copper and Brass Co., Ltd., Montreal, Que.

*Canadian H. W. Johns-Manville Co., Toronto.

*The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE FIGHTING APPARATUS

*Waterous Engine Works Co., Ltd., Brantford.

FIRE HOSE

*Canadian Consolidated Rubber Co., of Canada, Ltd., Montreal, Que.

Dunlop Tire and Rubber Goods Co., Limited, Toronto.

*Gutta Percha & Rubber, Ltd.

FIRE PREVENTION MATERIAL</

FIRE SPRINKLER SYSTEMS.

*Chicago Bridge & Iron Works, Bridgeburg, Ont.
 *The General Fire Equipment Co., Ltd., Toronto, Ont.

FIRE AND WATER DEPARTMENT SUPPLIES.

*Chicago Bridge & Iron Works, Bridgeburg, Ont.
 The Garth Co., Montreal, Que.
FISH, Atlantic Sea-Foods
 Maritime Fish Corporation Ltd., Montreal.

FITTINGS FOR SOIL PIPE

Anthes Foundry, Ltd., Toronto.

FITTINGS, steam

Warden King, Ltd., Montreal, Que.

FLAGS

*Scythes & Co., Ltd., Toronto.
 *Smart-Woods, Ltd., Montreal.

FLASHLIGHTS

Canadian Carbon Co., Toronto.

FLOORING, hardwood

Seaman Kent Co., Ltd., Meaford, Ont.

FLUE LINERS

Standard Clay Products, Ltd., St. Johns, Que.

FORGES:

*Sheldons, Ltd., Galt.

FORGINGS

Canada Forge Co., Ltd., Welland, Ont.
 *The Steel Co. of Canada, Ltd., Hamilton.

FORGINGS, DROP

*Dominion Stamping Co., Walkerville, Ont.

FOUNDRY EQUIPMENT

Northern Crane Works, Limited, Walkerville.

FOUNTAIN FRUITS and Juices

J. J. McLaughlin, Ltd., Toronto.

FRICTION CLUTCH PULLEYS:

*Dodge Mfg. Co., Ltd., Toronto.

FROGS AND CROSSINGS,

manganese
 Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

FUEL

Standard Fuel Co., Toronto.

FUR GARMENTS, men's and women's

Holt, Renfrew, Ltd., Quebec.

FUR GOODS

John W. Peck & Co., Ltd., Montreal, Que.

FUR TRIMMINGS, ornaments and buttons

J. Henry Peters Co., 1 Mincing St., Toronto.

FURNACES

Gurney Foundry Co., Ltd., Toronto.
 McClary Mfg. Co., London, Ont.
 The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

FURNACES, hot air

Bedford Stove Co., Bedford, Que.

FURNITURE, hall

The George McLagan Furniture Co., Ltd., Stratford, Ont.

FURNITURE, house and office

Canada Furniture Mfrs., Ltd., Woodstock, Ont.

FURNITURE, office

The Canadian Office and School Furniture Co., Ltd., Preston, Ont.

FURNITURE, reed and rattan

Imperial Rattan Co., Ltd., Stratford, Ont.

FUSE BOXES (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

GALVANIZED IRON:

*A. C. Leslie & Co., Montreal.

GALVANIZED SHEETS

*Dominion Sheet Metal Co., Hamilton.

GALVANIZERS

Aeme Stamping & Tool Works Ltd., Hamilton, Ont.
 *Ontario Wind Engine and Pump Co., Ltd., Toronto.

GASOLINE ENGINES

*Ontario Wind & Pump Co., Ltd., Toronto.
 De Laval Dairy Supply Co., Ltd., Peterboro, Ont.

GASOLINE FIRE ENGINES

*The Watrous Engine Works Co., Ltd., Brantford.

GASOLINE MOTORS, "Imperial" Marine

Bruce Stewart & Co., Ltd., Charlottetown, P.E.I.

GASOLINE STORAGE SYSTEMS,

special underground
 S. F. Bowser & Co., Toronto.

GASOLINE

*The Imperial Oil Co., Ltd., Toronto.

GEARS, CUT

Hamilton Gear & Machine, Toronto.

GENERATORS:

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines.
 *Canadian Westinghouse Co., Ltd., Hamilton.

GINS

The Melchers Gin & Spirits Distillery Co., Ltd., Montreal, Que.

GLASSWARE

Dominion Glass Co., Ltd., Montreal, Que.

GLASSWARE, cut

Roden Bros., Ltd., Toronto.

GLASS FOR BUILDINGS

Toronto Plate Glass Importing Co., Ltd., Toronto.

GLASS BENDERS

Toronto Plate Glass Importing Co., Ltd., Toronto.

GLASS, mirror

Toronto Plate Glass Importing Co., Ltd., Toronto.

GLOVES AND MITTS

A. R. Clarke & Co., Ltd., Toronto.
 Craig, Cowan Co., Limited, Toronto.

GLUE

Delany and Pettit, Ltd., Toronto, Ont.

GOLD FILLED WIRE AND PLATE

Canadian Seamless Wire Co., Toronto.

GOLD AND SILVER REFINERS

Canadian Seamless Wire Co., Toronto.

GRAIN CRUSHERS (Rapid Easy)

J. Fleury's Sons, Aurora, Ont.

GRAPE JUICE

J. J. McLaughlin, Ltd., Toronto.

GRATES.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

GRAVITY CARRIERS

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

GRILLES, metal

*Canada Wire & Iron Goods Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

GRINDEES, Pedestal and Bench.

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

GRINDING and Polishing Machinery

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

GRINDING WHEELS:

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

*The Dominion Abrasive Wheel Co., Ltd., New Toronto.

GRINDSTONES

*Richards Wilcox Canadian Co., Ltd., London, Ont.

GUNN SECTIONAL BOOKCASES

The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

GUY ANCHORS

B. J. Coghlin Co., Ltd., Montreal.

GYPSPUM, crushed

*Albert Mfg. Co., Hillsborough, N.B.

GYPSPUM PRODUCTS

*Manitoba Gypsum Co., Ltd., Winnipeg, Man.

De Laval Dairy Supply Co., Ltd., Peterboro, Ont.

HALL FURNITURE

The Geo. McLagan Furniture Co., Ltd., Stratford, Ont.

HAMS

F. W. Fearman Co., Ltd., Hamilton, Ont.

HANDLES (Axe, pick, sledge hammers, etc.)

The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.

HANGERS.

*Dodge Mfg. Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

HARDWARE

*Richards Wilcox Canadian Co., Ltd., London, Ont.

Taylor-Forbes Co., Ltd., Guelph, Ont.

The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

HARDWOOD FLOORING

Wilson Bros. Ltd., Collingwood, Ont.

HARDWOOD INTERIOR FINISH

Wilson Bros., Ltd., Collingwood, Ont.

HARDWOOD VENEER DOORS TO DETAIL

Wilson Bros., Ltd., Collingwood, Ont.

HARNESSES

Lamontagne Ltd., Montreal, Que.

HARPPON GUY ANCHORS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

HATS, men's straw

The Crown's Hat Co., Ltd., Galt, Ont.

HATS, ladies' and children's straw

The Crown Hat Co., Ltd., Galt, Ont.

HATS, ladies' and children's felt and beaver

The Crown Hat Co., Ltd., Galt, Ont.

HATS, ladies' felt and straw

Toronto Hat Mfg. Co., Toronto.

HAULAGE, Wire Rope

The Dominion Wire Rope Co., Ltd., Montreal.

HEATERS

*The Canadian Sirocco Co., Windsor, Ont.

*Watrous Engine Works Co., Ltd., Brantford.

HEATERS, feed water:

*The Goldie & McCulloch Co., Ltd., Galt.

HEATING APPLIANCES:

*Sheldons, Ltd., Galt.

HEATING SYSTEMS

Gurney Foundry Co., Ltd., Toronto.

HESSIANS

The Canadian Bag Co., Ltd., Montreal, Que.

*Scythes & Co., Ltd., Toronto.

*Smart-Woods, Ltd., Montreal.

HINGES:

*The Steel Co. of Canada, Ltd., Hamilton.

HOISTS

*M. Beatty & Sons, Ltd., Welland, Ont.

Northern Crane Works, Limited, Walkerville.

HOISTS, electric and pneumatic.

*M. Beatty & Sons, Ltd., Welland, Ont.

Northern Crane Works, Limited, Walkerville.

HOISTING MACHINERY.

*M. Beatty & Sons, Ltd., Welland, Ont.

Northern Crane Works, Limited, Walkerville.

HOSE, fire

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

HOSE, half, Imperial

Kingston Hosiery Co., Ltd., Kingston, Ont.

HOSE, rubber.

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber, Limited.

HUMIDIFIERS

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

HYDRAULIC PRESSES

Bawden Machine Co., Ltd., Toronto.

ICE CREEPERS

Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

ICE-MAKING MACHINERY

The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

INCUBATORS & BROODERS

Lee Mfg. Co., Ltd., Pembroke, Ont.

INDEX CARDS

Business Systems, Ltd., Toronto.

INJECTORS, automatic and autopoitive

Penberthy Injector Co., Ltd., Windsor, Ont.

INSULATION, patent seamless cork

*Canadian H. W. Johns-Manville Co., Toronto.

INTERLOCKING RUBBER TILING

*Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber Mfg. Co., of Toronto, Ltd., Toronto.

INVERTS

Standard Clay Products, Ltd., St. Johns, Que.

IRON:

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

IRON AND STEEL BARS

*The Steel Company of Canada, Limited, Hamilton.

IRON, refined bar

Starr Mfg. Co., Ltd., Dartmouth, N.S.

IRON PUMPS.

*The Bawden Machine Co., Limited, Toronto.

IRON STAIRWAYS:

*Canada Wire & Iron Goods Co., Hamilton.

*Dennis Wire & Iron Works Co., London.

IRONWORK, architectural

*Canada Wire & Iron Goods Co., Hamilton.

The Western Steel & Iron Co., Ltd., Winnipeg, Man.

IRONWORK, ornamental

*Canada Wire & Iron Goods Co., Hamilton.

The Western Steel & Iron Co., Ltd., Winnipeg, Man.

IRON, LEAD AND PUTTY

A. R. Whittall, Montreal.

JAM, canned goods, etc.

E. D. Smith & Son, Limited.

JAPANS, enamels, etc.

A. Muirhead Co., Ltd., Toronto.

JOINTERS:

*Berlin Machine Works, Ltd., Hamilton.

JELLY POWDER

S. H. Ewing & Sons, Montreal, Que.

JEWELRY, enamelled souvenir

Caron Bros., Montreal, Que.

JEWELRY, gold filled

Caron Bros., Montreal, Que.

JOIST HANGERS

*Richards-Wilcox Canadian Co., Ltd., London, Ont.

KELSEY WARM AIR GENERATOR

The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

KILNS:

*Sheldons, Ltd., Galt.

KINDLING

Standard Fuel Co., Toronto.

KNIFE GRINDEES:

*W. H. Banfield & Sons, Toronto.

KNITTED GOODS:

*Penman's, Ltd., Paris, Ont.

KNIVES

Henry Disston and Sons, Toronto, Ont.

The Peter Hay Knife Co., Ltd., Galt, Ont.

Simonds Canada Saw Co., Ltd., Montreal, Que.

KNIVES, pulp and paper

Henry Disston and Sons, Toronto, Ont.

The Peter Hay Knife Co., Ltd., Galt, Ont.

KODAKS AND PHOTOGRAPHIC SUPPLIES

Canadian Kodak Co., Ltd., Toronto.

LABELS

Lawson & Jones Ltd., London, Ont.

LABELS, lithographed

Harris Lithographing Co., Toronto.

LACE LEATHER

F. C. McCordick, St. Catharines, Ont.

*Sadler & Haworth, Montreal, Que.

*The D. K. McLaren Belting Co., Ltd., Montreal.

*The J. C. McLaren Belting Co., Ltd., Montreal.

LADDERS

Stratford Mfg. Co., Ltd., Stratford, Ont.

<p>LARD F. W. Fearman Co., Ltd., Hamilton, Ont.</p> <p>LATH The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.</p> <p>LATHE CHUCKS Ker & Goodwin, Brantford, Ont.</p> <p>LATHE-DOGS: Canadian Billings & Spencer Ltd., Welland.</p> <p>LAUNCHES Peterboro Canoe Co., Ltd., Peterboro, Ont.</p> <p>LAWN MOWERS Taylor-Forbes Co., Ltd., Guelph, Ont.</p> <p>LAWN SWINGS Stratford Mfg. Co., Ltd., Stratford, Ont.</p> <p>LAVATORIES, enameled Amherst Foundry Co., Ltd., Amherst, N.S.</p> <p>LAUNDRY SINKS Amherst Foundry Co., Ltd., Amherst, N.S.</p> <p>LEAD *The Consolidated Mining and Smelting Co. of Canada, Ltd., Trail, B.C.</p> <p>LEAD GRINDERS Benjamin Moore & Co., Ltd., Toronto.</p> <p>LEAD SHEET Toronto Plate Glass Importing Co., Ltd., Toronto.</p> <p>LEAD PIPE *The Steel Co. of Canada, Ltd., Hamilton. Toronto Plate Glass Importing Co., Ltd., Toronto. *The Canada Metal Co., Toronto.</p> <p>LEATHER The Robson Leather Co., Ltd., Oshawa.</p> <p>LEATHER, bookbinders' Clarke & Clarke, Ltd., Toronto.</p> <p>LEATHER, fancy Clarke & Clarke, Ltd., Toronto.</p> <p>LEATHER GOODS Lamontagne, Ltd., Montreal, Que.</p> <p>LEATHER, hemlock sole The Breithaupt Leather Co., Ltd., Berlin, Ont.</p> <p>LEATHER, patent colt and side leather A. R. Clarke & Co., Ltd., Toronto.</p> <p>LEATHER, sheep skin, etc. Clarke & Clarke, Ltd., Toronto.</p> <p>LEATHER, upholstering. Clarke & Clarke, Limited, Toronto.</p> <p>LEATHER, upper A. Davis & Son, Ltd., Kingston, Ont.</p> <p>LINK BELTING. *The Dodge Mfg. Co., Ltd., Toronto. *The Goldie & McCulloch Co., Ltd., Galt, Ont.</p> <p>LINOLEUM Dominion Oil Cloth Co., Ltd., Montreal, Que.</p> <p>LITHOGRAPHED BUSINESS STATIONERY Business Systems, Ltd., Toronto.</p> <p>LITHOGRAPHED TIN WARE: *MacDonald Mfg. Co., Ltd., Toronto.</p> <p>LITHOGRAPHERS American Bank Note Company, Ottawa, Ont. Harris Lithographing Co., Toronto. *Montreal Lithographing Co., Montreal. Stone, Limited Toronto. Rolph & Clark Ltd., Toronto.</p> <p>LOCKERS: *Canada Wire & Iron Works Co., Hamilton. *Dennis Wire & Iron Works Co., London. *Geo. B. Meadows, Wire, Iron and Brass Wks. Co., Toronto.</p>	<p>LOCOMOTIVE BLOCKS Standard Clay Products, Ltd., St. Johns, Que.</p> <p>LOCOMOTIVES, industrial *Montreal Locomotive Works, Ltd., Montreal.</p> <p>LOCOMOTIVE & MARINE BRASS WORKS The James Morrison Brass Mfg. Co., Ltd., Toronto.</p> <p>LOOSE LEAF, BINDERS AND FORMS Business Systems, Ltd., Toronto.</p> <p>LOOSE LEAF SYSTEMS Copeland-Chatterson Co., Ltd., Toronto.</p> <p>LOOSE LEAF SUPPLIES The Esdale Press, Ltd., Edmonton.</p> <p>LUBRICATORS, steam sight feed Penberthy Injector Co., Ltd., Windsor, Ont.</p> <p>LUGS, for silos and water tanks *Otterville Mfg. Co., Ltd., Otterville, Ont.</p> <p>LUMBER The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont. G. & J. Esplen, Montreal, Que.</p> <p>LUMBER, asbestos: *Canadian H. W. Johns-Manville Co., Toronto. *Eureka Mineral Wool & Asbestos Co., Toronto.</p> <p>LUMBERING BLANKETS. Slingsby Mfg. Co., Ltd., Brantford, Ont.</p> <p>LUMBER, red pine and spruce Gillies Bros., Ltd., Braeside, Ont.</p> <p>LUMBER, spruce, fir, larch and cedar Fennie Lumber Co., Ltd., Fennie, B.C.</p> <p>LUMBER, white pine Gillies Bros., Ltd., Braeside, Ont.</p> <p>MACHINE TOOLS *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, brick: *The Canadian Sirocco Co., Ltd., Windsor, Ont. *Sheldons, Ltd., Galt.</p> <p>MACHINERY, conveying. Canadian Mathews Gravity Carrier Co., Ltd., Toronto. *The Canadian Sirocco Co., Ltd., Windsor, Ont. *The Goldie & McCulloch Co., Ltd., Galt, Ont. *The Jeffrey Mfg. Co., Montreal.</p> <p>MACHINERY, elevating. Canadian Mathews Gravity Carrier Co., Ltd., Toronto. *The Goldie & McCulloch Co., Ltd., Galt, Ont. *The Jeffrey Mfg. Co., Montreal.</p> <p>MACHINERY, flour mill: *The Goldie & McCulloch Co., Ltd., Galt.</p> <p>MACHINERY, grinding *Canadian Hart Wheels, Ltd., Hamilton, Ont.</p> <p>MACHINERY, hoisting, etc. *The Jeffrey Mfg. Co., Montreal. *Polson Iron Works, Ltd., Toronto. J. & R. Weir, Montreal, Que. *M. Beatty & Sons, Ltd., Welland, Ont. Northern Crane Works, Limited, Walkerville.</p> <p>MACHINERY, ice cream J. J. McLaughlin, Ltd., Toronto.</p> <p>MACHINERY, iron working *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, pulp mill *The Watrous Engine Works Co., Ltd., Brantford.</p>	<p>MACHINERY, pumping *The Canadian Sirocco Co., Ltd., Windsor, Ont. *The Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINERY, punching and shearing *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, railroad and car shop *John Bertram & Sons Co., Ltd., Dundas, Ont.</p> <p>MACHINERY, roadmaking Sawyer-Massey Co., Ltd., Hamilton, Ont. *Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINERY, sawmill The E. Long Mfg. Co., Ltd., Orillia, Ont. P. Payette & Co., Penetanguishene, Ont. W. P. Plant, Hastings, Ont. *Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINERY, special Bawden Machine Co., Ltd., Toronto.</p> <p>MACHINERY, tannery W. P. Plant, Hastings, Ont.</p> <p>MACHINERY, transmission *Dodge Mfg. Co., Ltd., Toronto. *Goldie & McCulloch Co., Ltd., Galt, Ont.</p> <p>MACHINERY, wood working *Berlin Machine Works, Ltd., Hamilton. *The Watrous Engine Works Co., Ltd., Brantford.</p> <p>MACHINE WRENCHES: *Canadian Billings & Spencer, Ltd., Welland.</p> <p>MACHINES, painting Spramotor Co., London, Ont.</p> <p>MAGNESITE Canadian Carbonate Co., Ltd., Montreal, Que.</p> <p>MAILING TUBES: *Dominion Paper Box Co., Ltd., Toronto.</p> <p>MALT: *Hiram Walker & Sons, Ltd., Walkerville.</p> <p>MAPS AND MAP MOUNTING The Geo. M. Hendry Co., Ltd., Toronto. Stone, Limited, Toronto.</p> <p>MARTINGALE RINGS AND SLIDE LOOPS The Arlington Co. of Canada, Ltd., Toronto.</p> <p>MATCHERS: *Berlin Machine Works, Ltd., Hamilton.</p> <p>MATCHES: *The E. B. Eddy Co., Ltd., Hull.</p> <p>MEATS, canned The Wm. Davies Co., Ltd., Toronto.</p> <p>MECHANICAL DRAUGHT *Canadian Sirocco Co., Windsor, Ont.</p> <p>MECHANICAL STOKERS, *Hare Engineering Co., Limited, Toronto. *The Jones Underfeed Stoker Co., Ltd., Toronto.</p> <p>MEDICINES, patented and pharmaceutical Dr. Ed. Morin & Cie., Ltd., Quebec.</p> <p>METAL, babbitt *Canada Metal Co., Toronto. *Tallman Brass & Metal Co., Hamilton. Alonzo W. Spooner, Limited, Port Hope, Ont.</p> <p>METAL CEILING: *Metallic Roofing Co., Ltd., Toronto. *Metal Shingle & Siding Co., Ltd., Preston. *Pedlar People, Ltd., Oshawa, Ont.</p> <p>METAL PACKING *Garlock Packing Company, Hamilton.</p> <p>METAL ROOFING *Pedlar People Ltd., Oshawa, Ont.</p> <p>METAL, spinning and stamping The Booth-Coulter Copper and Brass Co., Ltd., Toronto.</p> <p>METAL SHINGLES: *Metal Shingle & Siding Co., Ltd., Preston. *The Metallic Roofing Co. of Canada, Ltd., Toronto, Ont. *Pedlar People, Ltd., Oshawa, Ont.</p>	<p>METAL SIDING: *Metallic Roofing Co., Ltd., Toronto. *Metal Shingle & Siding Co., Ltd., Preston. *Pedlar People, Ltd., Oshawa, Ont.</p> <p>MILK BOTTLE CAPS Business Systems, Ltd., Toronto.</p> <p>MILK DEALERS' MACHINERY AND SUPPLIES De Laval Dairy Supply Co., Ltd., Montreal, Que.</p> <p>MILLBOARD, asbestos: *Canadian H. W. Johns-Manville Co., Toronto. *Eureka Mineral Wool & Asbestos Co., Toronto.</p> <p>MILLING CUTTERS Pratt and Whitney Company of Canada, Dundas, Ont.</p> <p>MITTS AND GLOVES (Indian tan, red deerskins) Holt, Renfrew Ltd., Quebec, Que. A. R. Clarke & Co., Ltd., Toronto.</p> <p>MOCCASINS AND SLIPPERS (Indian tanned leathers) Holt, Renfrew, Ltd., Quebec, Que.</p> <p>MORTISES: *Berlin Machine Works, Ltd., Hamilton.</p> <p>MOTORS: *Canadian Crocker-Wheeler Co., Ltd., St. Catharines. *Canadian Westinghouse Co., Ltd., Hamilton.</p> <p>MOTORS, D.C. *Canadian Crocker Wheeler Co., St. Catharines, Ont.</p> <p>MOTORS, electric (alternating current) *Canadian Westinghouse Co., Ltd., Hamilton. Consolidated Electric Co., Ltd., Toronto. *Jones & Moore Electric Co., Ltd., Toronto. *The Canadian Crocker-Wheeler Co., Limited St. Catharines.</p> <p>MOTORS, electric (direct current) *Canadian Westinghouse Co., Ltd., Hamilton. Consolidated Electric Co., Ltd., Toronto. *Jones & Moore Electric Co., Ltd., Toronto.</p> <p>MOTORS, electric (repairing) Consolidated Electric Co., Ltd., Toronto.</p> <p>MOTOR TRUCKS: *The Gramm Motor Truck Co., Ltd., Walkerville.</p> <p>MOULDERS: *Berlin Machine Works, Ltd., Hamilton.</p> <p>NAILS *The Steel Company of Canada, Limited, Hamilton.</p> <p>NAILS, copper Parmenter and Bulloch Co., Ltd., Gananoque, Ont.</p> <p>NAILS, wire Parmenter and Bulloch Co., Ltd., Gananoque, Ont. The Graham Nail Works, Toronto.</p> <p>NAPHTHA *The Imperial Oil Co., Ltd., Toronto.</p> <p>NICKEL OXIDE Coniagas Reduction Co., Ltd., St. Catharines, Ont.</p> <p>NUTS *John Morrow Screw & Nut Co., Ltd., Ingersoll. *The National Acme Mfg. Co., Montreal. *The Steel Company of Canada, Limited, Hamilton.</p> <p>OAKUM, plumbers', Canadian Navy Factory Waste and Metal Co., Montreal, Que. *Scythes & Co., Ltd., Toronto.</p> <p>OAT CRUSHERS AND FLAKERS J. Fleury's Sons, Aurora, Ont.</p>
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OFFICE STATIONERY:

*The Montreal Lithographing Co., Ltd., Montreal.

OILS

Brandram-Henderson, Ltd., Montreal, Que.
A. Ramsay & Son Co., Montreal, Que.
Sherwin-Williams Co. of Canada, Ltd., Montreal, Que.

OIL FILTRATION AND CIRCULATING SYSTEMS

S. F. Bowser & Co., Toronto.

OILERS AND OIL STOVES

Sheet Metal Products Co. of Canada, Ltd., Toronto.

OIL STORAGE SYSTEMS, self measuring

S. F. Bowser & Co., Toronto.

OIL COMPANIES

Commercial Oil Co., Ltd., Hamilton, Ont.

OILS (Petroleum products)

*British American Oil Co., Ltd., Toronto.

OILS, Petroleum

*The Imperial Oil Co., Ltd., Toronto.

OILS, road

*Paterson Manufacturing Company, Toronto and Montreal.

OILCLOTHS, floor and table

Dominion Oil Cloth Co., Ltd., Montreal, Que.

OFFICE DESKS

*Goderich Organ Co., Goderich, Ont.

ORGANS

*Goderich Organ Co., Goderich, Ont.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.
Thomas Organ & Piano Co., Woodstock, Ont.

ORGANS, pipe

Casavant Freres, St. Hyacinthe, Que.
Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

ORGANS, parlour

Goderich Organ Co., Goderich.

ORNAMENTAL IRON WORK:

*Canada Wire & Iron Goods Co., Hamilton.
*Dennis Wire & Iron Works Co., London.
*The Geo. B. Meadows, Toronto Iron and Brass Goods Works, Co., Ltd., Toronto.

Ovens, portable bake

Bedford Stove Co., Bedford, Que.

OVERALLS

Mackenzie & Co., Ottawa, Ont.
Peerless Overall Co., Rock Island, Que.
Walker Pant and Shirt Co., Walkerville and Chatham, Ont.
The Standard Shirt Co., Ltd., Montreal, Que.

OVERCOATINGS

Rosamond Woollen Co., Aumont, Ont.

OVERHEAD RUNWAYS.

*Richard-Wilcox Canadian Co., Limited, London, Ont

PACKING BOXES

Barchard & Co., Ltd., Toronto.

PACKING, engine:

*Garlock Packing Co., Hamilton.

PACKING, rubber

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.
Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
*Gutta Percha & Rubber, Ltd. Jenkins Bros., Ltd., Montreal, Que.

PAIS AND TUBS, wooden

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

PAINTERS' SUPPLIES

A. Muirhead Co., Ltd., Toronto.

PAINTS

R. C. Jamieson & Co., Ltd., Montreal, Que

PAINTS and VARNISHES:

A. Muirhead Co., Ltd., Toronto.
Benjamin Moore & Co., Ltd., Toronto.

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

The Imperial Varnish & Color Co., Ltd., Toronto.

The Staneland Co., Ltd., Victoria, B.C.

A. Ramsay & Sons Co., Montreal, Que.

Sherwin-Williams Co. of Canada, Ltd., Montreal, Que.

*Ault & Wiborg Co. of Canada, Toronto.

*The Dougall Varnish Co., Ltd., Montreal.

Standard Paint Co. of Canada, Ltd., Montreal.

PAINTS, barn and bridge

Standard Paint and Varnish Co., Ltd., Windsor, Ont.

The Sherwin-Williams Co. of Canada, Ltd., Montreal.

*Paterson Manufacturing Company, Toronto and Montreal.

PANELBOARDS (Electric)
*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PAPER BOARDS

Bathurst Lumber Co., Ltd., Bathurst, N.B.

PAPER, book

Barber Paper & Coating Mills, Ltd., Georgetown, Ont.

PAPER BOXES

King Paper Box Co., Ltd., Montreal, Que.

*Rudd Paper Box Co., Ltd., Toronto.

PAPER, bond

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, envelope

Provincial Paper Mills Ltd., Georgetown, Ont.

The Toronto Paper Mfg. Co. Cornwall Ont.

PAPER, KRAFT, wrapping printing and waterproof

*Beveridge Paper Co., Ltd., Montreal, Que.

PAPER, news

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPER, wrapping

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPERS, building

Bathurst Lumber Co., Ltd., Bathurst, N.B.

*The Riordon Pulp and Paper Co., Montreal, Que.

Standard Paint Co. of Canada, Ltd., Montreal.

PAPER, coated, book and label

*Ritchie & Ramsay, Ltd., Toronto Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, coated cover

*Ritchie & Ramsay, Ltd., Toronto Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, coated box board

*Ritchie & Ramsay, Ltd., Toronto Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, enamelled blotting

*Ritchie & Ramsay, Ltd., Toronto Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, gummed tapes

Gummed Papers, Ltd., Brampton, Ont.

PAPER, label

Provincial Paper Mills Ltd., Georgetown, Ont.

PAPER, ledger

*Rolland Paper Co., Ltd., Montreal, Que.

The Toronto Paper Mfg. Co. Cornwall, Ont.

PAPER, super-book
The Toronto Paper Mfg. Co. Cornwall, Ont.

PAPER, wall
Stauntons, Ltd., Toronto.

PAPER, writing
The Toronto Paper Mfg. Co. Cornwall Ont.

PAPER, writing, high-grade

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, writing, superfine

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER BOXES:

*Dominion Paper Box Co., Toronto.

PARK SEATS

Stratford Mfg. Co., Ltd., Stratford, Ont.

PARLOR SUNDRIES

The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

PATENTS

Fetherstonhaugh & Co., Toronto. Ridout and Maybee, Toronto.

PATENT LITIGATION

Ridout and Maybee, Toronto.

PAY ROLL AUDITS

*International Time Recording Co. of Canada, Ltd., Toronto.

PEAS AND BEANS FOR SEED

W. P. Niles, Ltd., Wellington, Ont.

PERFORATED METALS:

*Canada Wire & Iron Goods Co., Hamilton.

PERFORATED MUSIC ROLLS

The Otto Higel Co., Limited, Toronto.

PERFUMES AND TOILET PREPARATIONS

Sovereign Perfumes Ltd., Toronto.

PETROLEUM PRODUCTS

*The Imperial Oil Co., Ltd., Toronto.

PHOTOMAILERS

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

PIANOS

Dominion Organ & Piano Co., Ltd., Bowmanville, Ont.

*Gourlay, Winter and Leeming, Toronto.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

PIANO ACTIONS

The Otto Higel Co., Ltd., Toronto.

PIANO KEYS

The Otto Higel Co., Ltd., Toronto.

PIANOS, player

*Gourlay, Winter & Leeming, Toronto.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

PIANO, player actions

The Otto Higel Co., Ltd., Toronto.

PIANO STOOLS and BENCHES

*Goderich Organ Co., Goderich, Ont.

PICKLES:

The Wm. Davies Co., Ltd., Toronto.

PICKLES AND CATSUPS:

T. A. Lytle Co., Ltd., Toronto.

PIG IRON

*The Steel Company of Canada, Limited, Hamilton.

PINE DOORS, SASH, MOULDINGS ETC.

Wilson Bros., Ltd., Collingwood, Ont.

PINS, society, emblems and Badges. Caron Bros., Montreal, Quebec.

PIPE, cast iron, for water and gas. National Iron Works, Ltd., Toronto.

PIPE COUPLINGS:

*The Steel Co. of Canada, Ltd., Hamilton

PIPE COVERINGS:

*Eureka Mineral Wood & Asbestos Co., Toronto.

PIPE ORGANS
Karn-Morris Piano and Organ Co.,

PIPES, culvert
Standard Clay Products, Ltd., St. Johns, Que.

PIPE AND NIPPLES, black and galvanized
*Canadian Tube & Iron Co., Ltd., Montreal, Que.

PIPE, sewer.
Hamilton and Toronto Sewer Pipe Co., Ltd., Hamilton, Ont.

PIPE, soil and fittings
Warden King Ltd., Montreal, Que.

PIPE AND TUBES, wrought merchant
*Page-Hersey Iron, Tube and Lead Co., Ltd., Toronto

PIPE, Threading and Cutting off Machines

John H. Hall & Sons, Limited, Brantford, Ont.

PISTON RODS

*The Canadian Drawn Steel Co., Ltd., Hamilton.

*Union Drawn Steel Co., Ltd., Hamilton, Ont.

PLANERS:

*Berlin Machine Works, Ltd., Hamilton.

PLANING MILLS

G. & J. Esplen, Montreal, Que.

PLASTER OF PARIS

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, hard wall

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, land

*Albert Mfg. Co., Hillsborough, N.B.

PLAYING CARDS:

*The Montreal Lithographing Co., Ltd., Montreal.

PLOWS

J. Fleury's Sons, Aurora, Ont.

PLUMBERS SUPPLIES

*T. McAvity & Sons, Limited, St. John, N.B.

The Garth Co., Montreal, Que.

The James Morrison Brass Mfg. Co., Ltd., Toronto.

PLUMBING APPLIANCES:

Standard Sanitary Mfg. Co., Ltd., Toronto.

PLUMBING SUPPLIES

Toronto Plate Glass Importing Co., Ltd., Toronto.

POLE LINE MATERIAL (wooden insulator top pins, side blocks, pole steps, cross arms.)

The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.

POLES, curtain

Daly & Morin, Montreal, Que.

POLES, telegraph and telephone, cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

PORCELAIN INSULATORS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PORK PACKERS AND CHEESE EXPORTERS

The Ingersoll Packing Co., Ltd., Ingersoll, Ont.

POSTS, split cedar fence

Fernie Lumber Co., Ltd., Fernie, B.C.

POSTERS

Stone, Limited, Toronto.

POULTRY SUPPLIES AND MEDICINES

Lee Mfg. Co., Ltd., Pembroke, Ont.

POWDER, blasting

Canadian Explosives, Ltd., Montreal, Que.

POWER PRESSES:

*Canadian Boomer & Boschert Press Co., Ltd., Montreal.

PRESSES, baling

William R. Perrin & Co., Ltd., Toronto.

PRESSES, Filter

William R. Perrin & Co., Ltd., Toronto.

PRESSES, Hydraulic

*Canadian Boomer & Boschert Press Co., Ltd., Montreal.

PRESSES, veneer

William R. Perrin & Co., Ltd., Toronto.

PRINTED BUSINESS STATIONERY
Business Systems, Ltd., Toronto.

PRINTERS
Rous & Mann, Ltd., Toronto.
R. G. McLean, Toronto.

PRINTERS, catalogue:
R. G. McLean, Toronto.
*Southam Press, Ltd., Toronto and Montreal.

PRINTING AND LITHOGRAPHING
Lawson & Jones, Ltd., London, Ont.

PRODUCE
The Wm. Davies Co., Ltd., Toronto.

PROVISIONS
The Wm. Davies Co., Ltd., Toronto.

PULLEYS.
*Dodge Mfg. Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
*Jeffrey Mfg. Co., Montreal, Que.

PULP AND PAPER MAKERS' FELTS

Ayers Limited, Lachute Mills, P.Q.
PULP, Bleached Sulphite
 The Edward Partington Pulp and Paper Co., St. John, N.B.

PULP, Sulphide

Bathurst Lumber Co., Ltd., Bathurst, N.B.

PUMPS.

Spramotor Co., London, Ont.
 *Canadian Fairbanks-Morse Co., Ltd., Montreal.
 *Bawden Machine Co., Ltd., Toronto.

PUMPS, ammonia

*Bawden Machine Co., Ltd., Toronto.

PUMPS, boiler feed.

*Bawden Machine Co., Ltd., Toronto.
 *The Goldie & McCulloch Co., Ltd., Galt.

PUMPS, centrifugal

*M. Beatty & Sons, Ltd., Welland, Ont.
 *Waterous Engine Works Co., Ltd., Brantford.

PUMPS, iron

Goold-Shapley-Muir Co., Ltd., Brantford, Ont.
 *Waterous Engine Works Co., Ltd., Brantford.

PUMPS, tar

*Bawden Machine Co., Ltd., Toronto.

PUMPS, turbine, and equipment

*Bawden Machine Co., Ltd., Toronto.

PUMPS (Turbine and reciprocating)

John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

PYJAMAS AND NIGHT ROBES

Williams, Greene & Rome, Berlin, Ont.

PYROMETERS

*Canadian Hoskins, Ltd., Walkerville.

RADIATORS

Taylor-Forbes Co., Ltd., Guelph, Ont.

Warden King, Ltd., Montreal, Que.

RAILINGS, brass and iron:

*Dennis Wire & Iron Works Co., London.

RAILWAY SIGNAL APPLIANCES

General Railway Signal Co. of Canada, Ltd., Montreal, Que.

RAILWAY SUPPLIES.

*Canadian Steel Foundries, Ltd., Montreal.

*Chicago Bridge & Iron Works, Bridgeburg, Ont.

B. J. Coghlin Co., Ltd., Montreal, Que.

RAILWAY TARIFF BINDERS

The Esdale Press Ltd., Edmonton.

READY-TO-WEAR GARMENTS, Ladies'

H. C. Boulter Co., Ltd., Toronto.

REAMERS

Pratt and Whitney Co. of Canada, Dundas, Ont.

*Butterfield & Co., Rock Island, P.Q.

"REDWOOD" lager

E. L. Drewry, Winnipeg, Man.

REED AND RATTAN GOODS

Canada Furniture Mfgs., Ltd., Woodstock, Ont.

REFRIGERATORS

Sanderson-Harold Co., Ltd., Paris, Ont.

Lee Mfg. Co., Ltd., Pembroke, Ont.

REFRIGERATING MACHINERY

The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

REFRIGERATORS, store, homes and institutions.

Ham & Nott Co., Ltd., Brantford, Ont.

John Hillock & Co., Ltd., Toronto.

REINFORCEMENT BARS

*The Steel Company of Canada, Limited, Hamilton.

REINFORCEMENT for concrete:

*Canada Wire & Iron Goods Co., Hamilton.

*Pedlar People Ltd., Oshawa, Ont.

RINGS, gold

Caron Bros., Montreal, Que.

RIVETS

Canadian Tube & Iron Co., Ltd., Montreal.

*The Steel Company of Canada, Limited, Hamilton.

RIVETS, bifurcated and tubular

Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

RIVETS AND BUREES, iron, copper and brass

Parmenter & Bulloch Co., Ltd., Gananoque, Ont.

ROLLERS, shade

Daly & Morin, Montreal, Que.

ROOFING, metal

*Metallic Roofing Co., Ltd., Toronto.

*Metal Shingle & Siding Co., Ltd., Preston.

ROOFING, ready to lay

*Canadian H. W. Johns-Manville Co., Toronto.

Standard Paint Co. of Canada, Ltd., Montreal, Que.

*Paterson Manufacturing Company, Toronto and Montreal.

ROOFINGS

*Bird & Son, Hamilton, Ont.

ROOF TRUSSES

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*Dominion Bridge Co., Ltd., Montreal.

ROPE

*Doon Twines Ltd., Doon, Ont.

ROPE, cotton

Hamilton Cotton Co., Hamilton, Ont.

RUBBER FOOTWEAR

Ames Holden, McCready, Ltd., Montreal, Que.

*Gutta Percha & Rubber, Ltd., The Miner Rubber Co., Ltd., Granby, Que.

*Smart-Woods, Ltd., Montreal.

RUBBER GOODS.

*Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

*Gutta Percha & Rubber, Ltd., Ltd., Toronto.

*Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

RUBBER MOULDS

Bawden Machine Co., Ltd., Toronto.

RUBBER PACKING

*Garlock Packing Company, Hamilton.

RULES

The Lufkin Rule Co. of Canada, Ltd., Windsor, Ont.

EYE

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

SADDLERY HARDWARE

*Dominion Stamping Co., Walkerville, Ont.

SAFES

*Goldie & McCulloch Co., Ltd., Galt, Ont.

SAMPLE CASES

The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.

J. Eveleigh & Co., Ltd., Montreal, Que.

SANDERS:

*Berlin Machine Works, Ltd., Hamilton.

SANDPAPER

Delany and Pettit, Ltd., Toronto Ont.

SASH CORD, cotton

Hamilton Cotton Co., Hamilton Ont.

SALT

Canadian Salt Co., Ltd., Windsor Ont.

SANITARY PAPER TOWELS:

*E. B. Eddy Co., Ltd., Hull.

SAW SHARPENING MACHINERY

*Canadian Hart Wheels, Ltd., Hamilton, Ont.

SAWS

Henry Disston & Sons, Ltd., Toronto.

Shurly & Deitrich, Galt, Ont.

SAWS, band:

*Berlin Machine Works, Ltd., Hamilton.

SAWS, crosscut

*Berlin Machine Works, Ltd., Hamilton.

SAWS, crosscut and oand

Shurly & Deitrich, Galt, Ont.

SAWS, circular mill

Shurly & Deitrich, Galt, Ont.

SAWS, hack:

*Victor Saw Works, Ltd., Hamilton, Ont.

SAWS, of all kinds

Simonds Canada Saw Co., Ltd., Montreal, Que.

SAWS, rip:

*Berlin Machine Works, Ltd., Hamilton.

Shurly & Deitrich, Galt, Ont.

SAWMILLS

G. & J. Esplen, Montreal, Que.

*The Waterous Engine Works Co., Ltd., Brantford, Ont.

SAWS, specialties

*Victor Saw Works, Ltd., Hamilton, Ont.

SCALES

The Gurney Scale Co., Hamilton, Ont.

SCALES, counter

The Gurney Scale Co., Hamilton, Ont.

SCALES, railway track, etc.

The Gurney Scale Co., Hamilton, Ont.

SCREENS:

*Canada Wire & Iron Goods Co., Hamilton.

*Jeffrey Mfg. Co., Montreal.

SCREEN DOORS AND WINDOWS

Sanderson-Harold Co., Ltd., Paris, Ont.

Ham & Nott Co., Ltd., Brantford, Ont.

SCREWS

*John Morrow Screw & Nut Co., Ltd., Ingersoll.

*The National Acme Mfg. Co., Montreal.

*The Steel Company of Canada, Limited, Hamilton.

SCREW PLATES

*Butterfield & Co., Rock Island, P.Q.

SECURITIES, engraved

American Bank Note Co., Ottawa, Ont.

SERGES

Rosamond Woollen Co., Almonte, Ont.

SHAFTING.

Canada Forge Co., Ltd., Welland, Ont.

*Canadian Drawn Steel Co., Ltd., Hamilton.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*Union Drawn Steel Co., Ltd., Hamilton, Ont.

*Dodge Mfg. Co., Ltd., Toronto.

SHANTY BLANKETS.

Slingsby Mfg. Co., Ltd., Brantford, Ont.

SHAPERS:

*Berlin Machine Works, Ltd., Hamilton.

SHEAR BLADES, iron

The Peter Hay Knife Co., Ltd., Galt, Ont.

SHEATHING

*Paterson Manufacturing Company, Toronto and Montreal.

SHEATHING, asbestos corrugated:

*Eureka Mineral Wool & Asbestos Co., Toronto.

SHEET METAL WARE (iron, galvanized and enamelled)

Sheet Metal Products Co. of Canada, Ltd., Toronto.

SHEET METAL STAMPINGS

Acme Stamping & Tool Works, Ltd., Hamilton, Ont.

SHELLAC

*Berry Bros., Ltd., Winnipeg.

SHINGLES, asbestos cement:

*Canadian H. W. Johns-Manville Co., Toronto.

SHIRTS

MacKenzie & Co., Ottawa, Ont.

Williams, Greene & Rome, Berlin, Ont.

Pearless Overall Co., Rock Island, Que.

John W. Peck & Co., Ltd., Montreal, Que.

SHIRTS, workmen's

A. R. Clarke & Co., Ltd., Toronto.

SHOE PEGWOOD

O. Chalifour, Quebec, Que.

SHOE LININGS

Galt Knitting Co., Ltd., Galt, Ont.

SHOES, running and athletic

Ames-Holden-McCready, Ltd., Montreal, Que.

SHOOKS

Barchard & Co., Ltd., Montreal, Que.

SILVER BULLION

Coniagas Reduction Co., Ltd., St. Catharines, Ont.

SILVERWARE

Toronto Silver Plate Co., Ltd.

SILVERSMITH

Canadian Wm. A. Rogers, Ltd., Toronto.

Standard Silver Co., Toronto.

SILVERWARE, sterling

Roden Bros., Ltd., Toronto.

SINKS, enameled

Amherst Foundry Co., Ltd., Amherst, N.S.

SKATES, figure

Canada Cycle & Motor Co., Ltd., Toronto.

SKATES, genuine Acme

Canada Cycle & Motor Co., Ltd., Toronto.

SKATES, hockey

Canada Cycle & Motor Co., Ltd., Toronto.

SKATES, ice

Canada Cycle & Motor Co., Ltd., Toronto.

SKIFFS

Peterboro Canoe Co., Ltd., Peterboro, Ont.

SKYLIGHTS:

*Metallic Roofing Co., Ltd., Toronto.

*Pedlar People Ltd., Oshawa, Ont.

SLEIGHS

Tudhope-Anderson Co., Ltd., Orillia, Ont.

SLIPPERS

Ames-Holden-McCready, Ltd., Montreal, Que.

SMOKE CONSUMERS,

*The Jones Underfeed Stoker Co., Ltd., Toronto.

SOAPS

J. Barsalou & Co., Ltd., Montreal, Que.

SOAP (soft, oil)

The Imperial Varnish & Color Co., Ltd., Toronto.

The Sherwin-Williams Co. of Canada, Ltd., Montreal.

SODA WATER FOUNTAINS

J. J. McLaughlin, Ltd., Toronto.

SOIL PIPE

Anthes Foundry, Ltd., Toronto.

SOLDER

Alonso W. Spooner, Ltd., Port Hope, Ont.

*The Canada Metal Co., Toronto.

SOLDER, silver

Geo. H. Lees & Co., Hamilton.

SOLDER, wire and bar

*American Can Co., Montreal, and Hamilton.

SNOWSHOES

Holt, Renfrew, Ltd., Quebec, Que.

SPARK PLUGS

Canadian Carbon Co., Ltd., Toronto.

SPIRAL CONVEYORS.

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

SPLIT PEAS

H. Murton, Guelph, Ont.

SPIKES, railway and marine

Starr Mfg. Co., Ltd., Dartmouth, N.S.

SPIRITS

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

*Hiram Walker & Sons, Ltd., Walkerville, Ont.

SPORTING MEDALS AND TROPHIES

Roden Bros., Ltd., Toronto.

SPRAYERS

Spramotor Co., London, Ont.

SPRING COTTERS

*Richards-Wilcox Canadian Co., Ltd., London, Ont.

SPRINGS

- STAINS**
R. C. Jamieson & Co., Ltd., Montreal, Que.
- STAINS, creosote shingle**
A. Muirhead Co., Ltd., Toronto.
- STAMPINGS**
*Dominion Stamping Co., Ltd., Walkerville, Ont.
- STAMPS, steel, brass and rubber**
Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.
- STAMP MILLS:**
*Jenckes Machine Co., Sherbrooke.
- STATIONERY, office**
Harris Lithographing Co., Toronto.
- STEAM PIPE and BOILER COVERINGS, asbestos:**
*Canadian H. W. Johns-Manville Co., Toronto.
*Eureka Mineral Wool & Asbestos Co., Toronto.
- STEAM SHOVELS**
*M. Beatty & Sons, Ltd., Welland, Ont.
- STEAM SPECIALTIES:**
*Sheldons, Ltd., Galt.
- STEAM TRAPS**
*Canadian Sirocco Co., Windsor, Ont.
*Canadian Morehead Manufacturing Co., Limited, Woodstock.
- STEEL:**
*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.
- STEEL BILLETS & BLOOMS**
*The Steel Company of Canada, Limited, Hamilton.
- STEEL BUILDINGS**
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*Dominion Bridge Co., Ltd., Montreal.
*Pedlar People, Ltd., Oshawa, Ont.
- STEEL CASTINGS**
*Canadian Steel Foundries, Ltd., Montreal, Que.
*Dominion Steel Foundry Co., Ltd., Hamilton.
- STEEL PEN STOCKS:**
*Jenckes Machine Co., Sherbrooke.
- STEEL RODS:**
*The Steel Co. of Canada, Ltd., Hamilton.
- STEEL SASH:**
*Dennis Wire & Iron Works, Co., London.
*Henry Hope & Sons, Ltd., Toronto.
- STEEL SHELVING:**
*Dennis Wire & Iron Works, Co., London.
- STEEL WIRE RODS**
*The Steel Company of Canada, Limited, Hamilton.
- TELEPHONE ACCESSORIES,**
*Northern Electric Co., Limited, Montreal.
- STENCILS, brass**
Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.
- STEREOTYPING**
Central Press Agency, Toronto.
- STOKERS,**
*Hare Engineering Co., Limited, Toronto.
*The Jones Underfeed Stoker Co., Ltd., Toronto.
- STOOLS and BENCHES, piano and organ**
*Otterville Mfg. Co., Ltd., Otterville, Ont.
- STONE**
The Corinthian Stone Co., Guelph, Ont.
The Hagersville Contracting Co., Hagersville, Ont.
- STORE FITTINGS**
The Canadian Office & School Furniture Co., Ltd., Preston, Ont.
- STOVES**
Tudhope-Anderson Co., Ltd., Orillia, Ont.
Bedford Stove Co., Bedford, Que.
- STOVE BOARDS**
Sheet Metal Products Co. of Canada, Ltd., Toronto.
- STOVE LININGS**
Standard Clay Products, Ltd., St. Johns, Que.
- STOVES and RANGES**
Bedford Stove Co., Bedford, Que.
Gurney Foundry Co., Ltd., Toronto.
Lee Mfg. Co., Ltd., Pembroke, Ont.
The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.
McClary Mfg. Co., London, Ont.
- STRETCHERS, lace curtain**
*Otterville Mfg. Co., Ltd., Otter-
- STRUCTURAL STEEL**
Dominion Bridge Co., Montreal.
*Hamilton Bridge Works Co., Ltd., Hamilton.
*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*The Structural Steel Co., Ltd., Montreal.
- SUIT CASES**
J. Eveleigh & Co., Ltd., Montreal.
The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.
- SURFACERS:**
*Berlin Machine Works, Ltd., Hamilton.
- SWITCHBOARDS**
*The Canadian Independent Telephone Co., Ltd., Toronto.
- SWITCHBOARDS (Electric)**
*Crouse-Hinds Co. of Canada, Ltd., Toronto.
- SWITCHES (Electric)**
*Crouse-Hinds Co. of Canada, Ltd., Toronto.
- SWITCHES, railway**
Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.
- SWITCHES and FROGS**
*Canadian Steel Foundries, Ltd., Montreal, Que.
- SWITCH STANDS**
*Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.
- TABLES, billiard**
Samuel May & Co., Toronto.
- TABLE COVERS, chenille**
Hamilton Cotton Co., Hamilton, Ont.
- TAGS, shipping and factory**
Business Systems, Ltd., Toronto.
- TANKS**
*Chicago Bridge & Iron Works, Bridgeburg, Ont.
Goold-Shapley-Muir Co., Ltd., Brantford, Ont.
*Ontario Wind Engine & Pump Co., Ltd., Toronto.
*The Goldie & McCullough Co., Ltd., Galt.
*The Watrous Engine Works Co., Ltd., Brantford.
- TANNERS' SUPPLIES**
McClary Mfg. Co., London, Ont.
- TAPS**
Pratt and Whitney Co. of Canada, Dundas, Ont.
*Butterfield & Co., Rock Island, P.Q.
- TAP WRENCHES**
*Butterfield & Co., Rock Island, P.Q.
- TAPES, measuring**
The Lufkin Rule Co. of Canada, Ltd., Windsor, Ont.
- TAPES, paper and cloth, gummed and ungummed**
Gummed Papers, Ltd., Brampton, Ont.
- TELEPHONE ACCESSORIES**
Canadian Independent Telephone Co., Toronto.
*Northern Electric Co., Limited, Montreal, Que.
- TELEPHONE APPARATUS**
*The Canadian Independent Telephone Co., Ltd., Toronto.
- TELEPHONES, Automatic**
*Canadian Independent Telephone Co., Toronto.
- TENTS**
Mackenzie & Co., Ottawa, Canada.
Turner, J. J., & Sons, Peterborough, Ont.
*Scythes & Co., Ltd., Toronto.
- TERRA ALBA**
*Albert Mfg. Co., Hillsborough, N.B.
- TERRA COTTA (architectural)**
Toronto Plate Glass Importing Co., Ltd., Toronto.
- TEXTILE SUPPLIES (shuttles, bobbins, spools and picker sticks.)**
The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.
- THEATRE CURTAINS, asbestos:**
*Canadian H. W. Johns-Manville Co., Toronto.
- THUMB SCREWS:**
*Canadian Billings & Spencer, Ltd., Welland.
- TILING, interlocking rubber.**
Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
*Gutta Percha & Rubber, Ltd.
- TIMBER:**
*The B.C. Mills Timber & Trading Co., Vancouver, B.C.
- TIME RECORDERS**
*International Time Recording Co. of Canada, Ltd., Toronto.
- TIN WARE (stamped, pierced, japanned and lithographed)**
Sheet Metal Products Co. of Canada, Ltd., Toronto.
- TIRES, cycle, auto and truck.**
Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
*Gutta Percha & Rubber, Ltd.
- TRADE MARKS AND DESIGNS**
Ridout & Maybee, Toronto.
- TRANSFORMERS**
*The Canadian Crocker-Wheeler Co., Limited St. Catharines.
- TRANSFORMERS, power**
*Canadian Crocker Wheeler Co., Ltd., St. Catharines, Ont.
- TRANSFORMERS, distributing**
*Canadian Crocker Wheeler Co., Ltd., St. Catharines, Ont.
- TOOLS, track**
B. J. Coghlin Co., Ltd., Hamilton, Ont.
- TRANSMISSION MACHINERY.**
*Dodge Mfg. Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
*The Watrous Engine Works Co., Ltd., Brantford.
- TROLLEYS.**
*Richard-Wilcox Canadian Co., Limited, London, Ont.
Northern Crane Works, Limited, Walkerville.
- TRUCKS**
The Gurney Scale Co., Hamilton, Ont.
*The Canadian Sirocco Co., Ltd., Windsor, Ont.
Northern Crane Works, Limited, Walkerville.
- TRUCKS, brick, tile and lumber**
*Watrous Engine Works Co., Ltd., Brantford.
- TRUCKS, MOTOR**
*National Steel Car Co., Limited, Hamilton.
- TRUCKS, WAREHOUSE and FACTORY**
The W. S. Mahaffy Co., Toronto.
- TRUNKS**
Lamontagne Ltd., Montreal, Que.
J. Eveleigh & Co., Ltd., Montreal, Que.
The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.
- TUBING, Brass and Copper**
*Booth-Coulter Copper & Brass Co., Ltd., Toronto.
Canadian Seamless Wire Co., Toronto.
*Tallman Brass and Metal Co., Hamilton, Ont.
- TUBING, Gold and Silver**
Canadian Seamless Wire Co., Toronto.
- TUMBLERS, foundry**
Northern Crane Works, Limited, Walkerville.
- TURBINES, water.**
*The Canadian Sirocco Co., Ltd., Windsor, Ont.
- TURBINES, steam:**
*The Canadian Crocker-Wheeler Co., Limited St. Catharines.
- TURBINE and RECIPROCATING PUMPS.**
*The Bawden Machine Co., Limited, Toronto.
- TWEEDS**
Rosamond Woollen Co., Almonte, Ont.
- TWINES**
*Doon Twines Ltd., Doon, Ont.
- TWINES, binder**
Brantford Cordage Co., Ltd., Brantford, Ont.
- TWINES, cotton**
Hamilton Cotton Co., Hamilton, Ont.
- TWIST DRILLS**
Pratt and Whitney Co., of Canada, Dundas, Ont.
*The Wilt Twist Drill Co., Ltd., Walkerville, Ont.
- UNDERWEAR**
Galt Knitting Co., Ltd., Galt, Ont.
- UNDERWEAR, imperial**
Kingston Hosiery Co., Ltd., Kingston, Ont.
- UNIONS**
*Dart Union Co., Ltd., Toronto, Ont.
*Otterville Mfg. Co., Ltd., Otterville, Ont.
- UPHOLSTERED FURNITURE, leather and tapestries**
Imperial Rattan Co., Ltd.
- VACUUM PUMPS**
*The Bawden Machine Co., Limited, Toronto.
- VALVES**
*Kerr Engine Co., Ltd., Walkerville.
*T. McAvity & Sons, Limited, St. John, N.B.
- VALVES, for steam and water**
Jenkins Bros., Ltd., Montreal, Que.
- VALVES, regrinding globe, angle cross checks, swing checks, etc.**
Penberthy Injector Co., Ltd., Windsor, Ont.
- VARNISHES**
*Ault & Wiborg Co. of Canada, Ltd., Toronto.
Berry Bros., Walkerville, Ont.
*Dougall Varnish Co., Ltd., Montreal, Que.
R. C. Jamieson & Co., Ltd., Montreal, Que.
Sherwin-Williams Co. of Canada, Ltd., Montreal.
*Toch Bros., Toronto.
- VAULTS and VAULT DOORS:**
*The Goldie & McCullough Co., Ltd., Galt.
- VENTILATING APPLIANCES:**
*The Canadian Sirocco Co., Ltd., Windsor, Ont.
*Sheldons, Ltd., Galt.
- VENTILATING SYSTEMS**
*The Canadian Sirocco Co., Ltd., Windsor, Ont.
Gurney Foundry Co., Ltd., Toronto.
- VENTILATORS:**
*The Metallic Roofing Co. of Canada, Ltd., Toronto, Ont.
*Pedlar People, Ltd., Oshawa, Ont.
- VINEGAR**
The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.
- WAGONS**
Tudhope-Anderson Co., Ltd., Orillia, Ont.
- WALL BOARD**
*Bird & Son, Hamilton, Ont.
- WALL COPING**
Standard Clay Products, Ltd., St. Johns, Que.
- WASHERS**
*The Steel Company of Canada, Limited, Hamilton.
- WASHERS, plate or wrought**
London Rolling Mill Co., Ltd., London, Ont.
- WASTES, wool and cotton**
Factory Waste and Metal Co., Montreal, Que.
*Scythes & Co., Ltd., Toronto.
- WATER-PROOF CEMENT COATING**
Benjamin Moore & Co., Ltd., Toronto.
*Paterson Manufacturing Company, Toronto and Montreal.
- WAXED PAPER**
Business Systems, Ltd., Toronto.
- WEBBING, elastic**
Hamilton Cotton Co., Hamilton, Ont.
- WEBBING, non-elastic**
Hamilton Cotton Co., Hamilton, Ont.
- WHEELS**
*Canadian Car & Foundry Co., Ltd., Montreal, Que.
- WHEELS, corundum**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.
- WHEELS, emery**
*Canadian Hart Wheels, Ltd., Hamilton, Ont.
- WHEELS, propeller, iron and steel**
*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.
- WHEELS, turbine, water.**
*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.
- WHEELS, water (impulse type)**
John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

WELL DRILLING TOOLS AND MACHINERY

Oil Well Supply Co., Ltd., Petrolia, Ont.

WHIPS AND LASHES

Lay Whip Co., Rock Island, Que.

WHISKY

*Hiram Walker & Sons, Ltd., Walkerville, Ont.

WHITE ARSENIC

Coniagas Reduction Co., Ltd., St. Catharines, Ont.

WHITE ENAMEL

*Berry Bros., Ltd., Winnipeg.

WHITE LEAD

Brandram-Henderson, Ltd., Montreal, Que.

A. Ramsay & Son Co., Montreal, Que.

WINDMILLS

*Gould-Shapley-Muir Co., Ltd., Brantford, Ont.

*Ontario Wind Engine & Pump Co., Ltd., Toronto.

WINDOW SHADES

Daly & Morin, Montreal, Que.

WIRE

*The Steel Company of Canada, Limited, Hamilton.

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

The Graham Nail Works, Toronto

WIRE CLOTH

*Canada Wire & Iron Goods Co., Hamilton.

C. H. Johnston & Sons, Ltd., Montreal, Que.

WIRE, feeder and trolley:

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRED GLASS:

*Metallic Roofing Co., Ltd., Toronto.

WIRE GUARDS

*Canada Wire & Iron Goods Co., Hamilton.

C. H. Johnston & Sons, Ltd., Montreal, Que.

WIRE, Insulated Electric,

*Northern Electric Co., Limited, Montreal.

WIRE, insulated electric:

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRE ROPE

The Dominion Wire Rope Co., Ltd., Montreal.

*The B. Greening Wire Co., Ltd., Hamilton.

WIRE, Weatherproof:

*Northern Electric Co., Limited, Montreal.

*Eugene F. Phillips, Electrical Works, Ltd., Montreal.

WIRE WORK

C. H. Johnson & Sons, Ltd., Montreal, Que.

*Canada Wire & Iron Goods Co., Hamilton.

*The Geo. B. Meadows, Toronto Iron and Brass Goods Works Co., Ltd., Toronto.

WOOD

Standard Fuel Co., Toronto.

WOOD PRINTERS

Barchard & Co., Ltd., Toronto.

WOOD PULP, mechanical

La Cie de Pupe de Chicoutimi, Chicoutimi, Que.

WOOD SPLIT PULLEYS.

*Dodge Mfg. Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

WOOL

*H. V. Andrews, Toronto.

WORSTED COATINGS AND SUITINGS

Rosamond Woollen Co., Almonte, Ont.

WRAPPERS, book, bottle, etc.

*The Thompson & Norris Co., of Canada, Ltd., Niagara Falls, Ont.

WROUGHT IRON PIPE

*The Steel Company of Canada, Limited, Hamilton.

WROUGHT PIPE:

*The Steel Co. of Canada, Ltd., Hamilton.

YARNS, cotton

Hamilton Cotton Co., Hamilton, Ont.

ZINC, electrical

*The Canada Metal Co., Toronto.

* For Display Advertisement See Index Page 909

THE BOOTH-COULTER COPPER & BRASS COMPANY, LTD.**SHEETS TUBES COPPER & BRASS AND RODS**SPECIAL SIZES CUT TO ORDER FROM LARGE STOCK—PROMPT SHIPMENT
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OEO

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Works: Gillette Building, 73 St. Alexander Street

Established
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Offices Throughout the Civilized World

Executive Offices: Nos. 346 and 348 BROADWAY, N.Y. CITY, U.S.A.

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Offices—Toronto General Trusts Building
59 Yonge StreetTORONTO
Canada

INDUSTRIAL CANADA



"THE CHIEF TEST"

YOU ask for my opinion of Advertising as a business policy, and what it has done for the firm of J. S. Fry and Sons, Ltd. In reply, I might well ask, What has it NOT done? I would describe Advertising as the chief text in the Gospel of Business.

WITHOUT it we could never have given—and be giving—employment to so many thousands of workers, or have benefited so many millions of people by our manufactures.

ONE would say as the result of practical knowledge that all forms of Advertisements are good and beneficial, relatively though in my opinion—I give it for what it is worth—those in Newspapers and Magazines are probably more far-reaching in their results.

FROM long experience I am convinced that, as Sir William Lever so well puts it, "the firms which have continued to advertise have benefited enormously and so will continue advertising."

IS it not undeniable that the success of nearly all our great commercial concerns has been largely due to the application of this educational and dynamic principle?

OF course it can only be expected to succeed where the commodities concerned are intrinsically good and valuable in themselves and able to stand the test of time.

MR. CONRAD P. FRY,
of J. S. Fry & Sons, Ltd., in the Daily News.

For more than a decade Fry's advertising and the advertising of Lever Bros., Limited in Canada have been prepared and placed by

J. J. GIBBONS, LIMITED

General Advertising Agents

MONTREAL
Cables—Gibjay, Toronto.

Head Office:
TORONTO

WINNIPEG
Codes—Liebers. ABC 5th Edition

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HEAD OFFICE BRANCH OFFICES,
• TORONTO • MONTREAL. HAMILTON. WINNIPEG. VANCOUVER. HALIFAX. QUEBEC.

MALLEABLE IRON CASTINGS

The Pratt & Letchworth Company Limited

BRANTFORD ONTARIO

AUTOMOBILE PARTS
DROP FORGINGS



We have erected and are now operating

THE LARGEST COMMERCIAL DROP FORGE PLANT IN CANADA

We are equipped to handle large forging contracts.
This expansion also increases our stamping facilities.
We stand by our Motto: Quality and Service.

SHEET METAL WORK
GENERAL STAMPINGS

DOMINION FORGE & STAMPING CO., LIMITED
Walkerville - Ontario



"Giving Satisfaction"

This is the true measure of a manufacturer's service to his constituency. It has been our constant aim since we commenced to do business eight years ago. Our large and rapidly expanding trade is proof that our products and our methods of doing business appeal to our customers.

The greatest possible care and attention are given at our Refinery to the manufacture of the different lines—the highest obtainable quality being our goal. The statement "WE MAKE THAT GOOD OIL" has now passed into a proverb as referring to the products of The British American Oil Co.

We guarantee every gallon of British "Peerless" and Motor Gasolene, Benzine, Lamp Oil, Lubricating Oil, "Ford Motor Oil," "Autolene" for other motors, Fuel Oil, Road Oil and other Products.

We are prepared to live up to the guarantee that if any of our goods are not as represented they may be returned at our expense and money will be refunded if already paid for same. In no case will we allow a customer to make a loss on account of our products not being equal to representation.

We make our products as good as we know how and have justifiable confidence in them. Our customers have a right to demand value for their money and we see that they get it. We do not pose as philanthropists; this is pure business.

Our watchword is "GIVING SATISFACTION."

The BRITISH AMERICAN OIL CO., Limited

REFINERS, FOOT OF CHERRY STREET, TORONTO

Head Office: LUMSDEN BUILDING, TORONTO

Branches: MONTREAL, OTTAWA, LONDON, WINDSOR

"DURATION"

is just another way of arranging the letters of

DART UNION

This is no mere coincident, for a Dart Union is enduring and use will prove to you that it is the most economical means of connecting pipe.

YOUR JOBBER SELLS AND RECOMMENDS DART UNIONS

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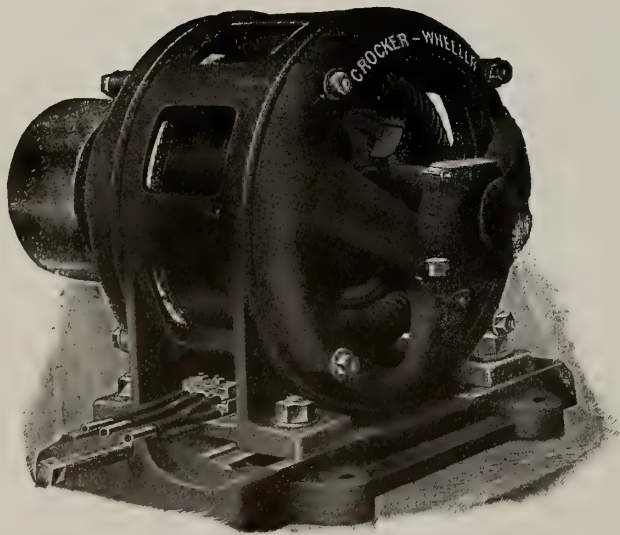
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THE DESIGN OF CROCKER-WHEELER INDUCTION MOTORS

INCLUDES :

Heavy Shafts

Large Journals

High Power Factor

Excellent Efficiency

They have many other desirable features;
Bulletin 155 describes them.

THE CANADIAN CROCKER-WHEELER CO., Limited

MANUFACTURERS AND ELECTRICAL ENGINEERS

Head Office and Works : St. Catharines

District Offices : Montreal, Toronto, Vancouver

We Have Prepared the Way

WE HAVE SPENT thousands of dollars on Street Car patrons impressing on them the advantages of purchasing "Made-in-Canada" Products.

We were the first in the field with a "Made-in-Canada" campaign, prepared, placed and carried out entirely at our own expense, for the benefit of Canadian Street Car advertisers.

Canadian Manufacturers

who use Street Car advertising get the direct benefit of all the money we have spent, in addition to getting the greatest possible amount of the best advertising for every dollar of their own they spend on Street Car space.

There are 1,735,685 passengers carried daily on the street car lines we control throughout Canada, and with these we have prepared the way for "Made-in-Canada" campaigns.

They are ready to purchase goods made in Canada, but they have to be told what goods are made here.

At a cost of only One Dollar you can reach over 48,000 of these consumers through an advertisement in the Street Cars.

Let us tell you more about it. Any of our offices will respond promptly to a request for information.

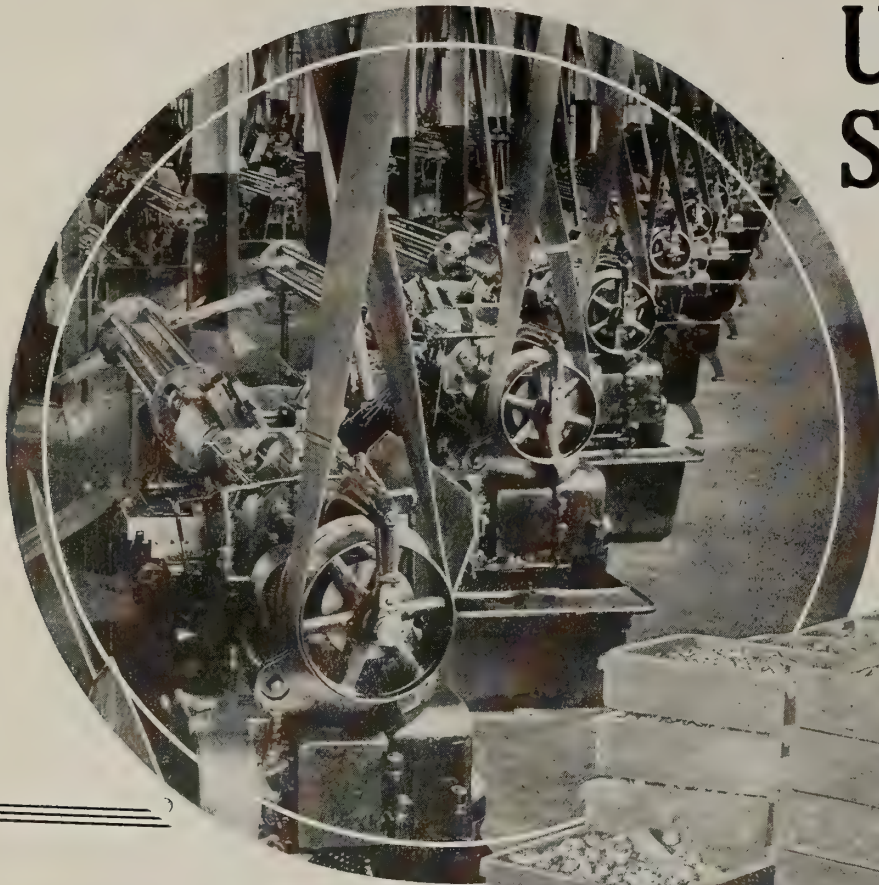
The
Canadian Street Car Advertising Company

Limited

MONTREAL

TORONTO

WINNIPEG



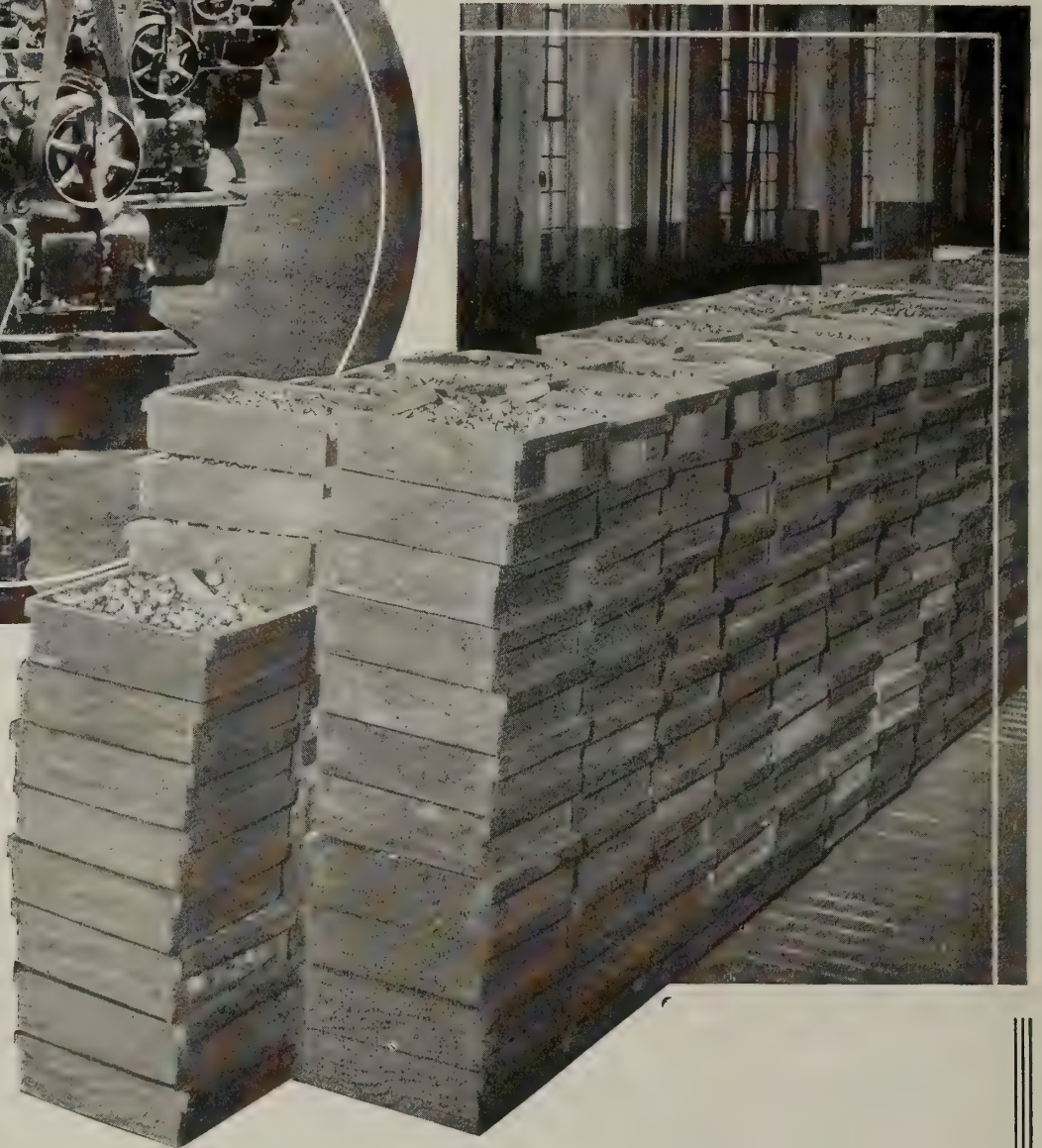
Up-to-the-Minute SCREW SERVICE

NAMCO Screw-Cutting SERVICE

The productive power of the Acme Automatic equipment accounts for the enormous daily output of screw machine work at the NAMCO Plant at Montreal.

The completeness of the NAMCO equipment means much in the way of accuracy and service to buyers of Screw Machine Work — Standard or Special.

NAMCO Special Parts are made to your specifications. They have clean-cut, accurate threads and are smoothly finished. They are made right.



To Buyers of Canadian-Made Screw Machine Work—Standard or Special

NAMCO Standard Screws, Nuts and Studs are supplied from stock in all popular styles and sizes.

*Estimates will be made from your samples
or blue-prints. Send them in.*

The National-Acme Manufacturing Co.
DECOURCELLES AND
G.T.R., ST. HENRI
MONTREAL, P.Q.



LATHES and Attachments

for the manufacture of— — —

This Equipment is
all New, Modern
and Heavy

Write or wire our
nearest office for
particulars

EARLY DELIVERY

6", 8"
and
9.2
HIGH
EXPLOSIVE
SHELLS

**THE JOHN BERTRAM & SONS CO.
LIMITED**

DUNDAS, ONTARIO, CANADA

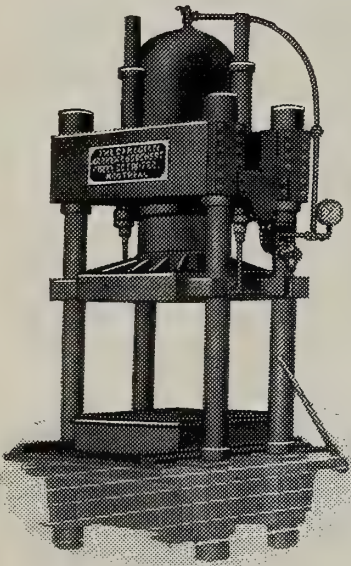
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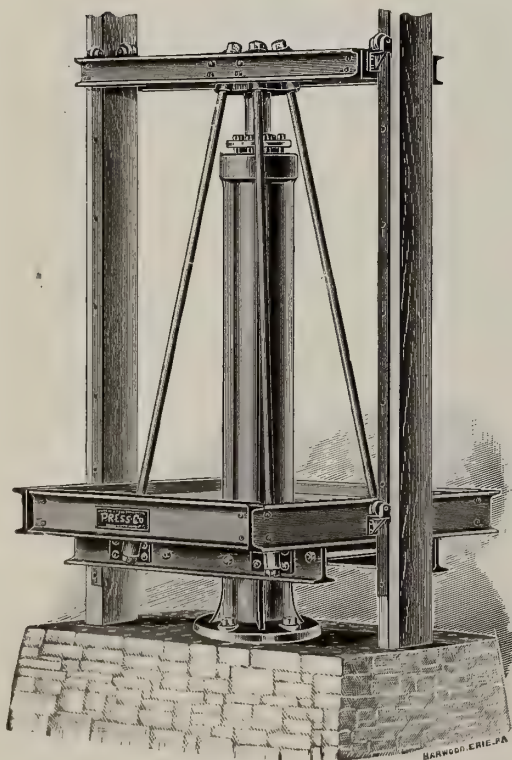
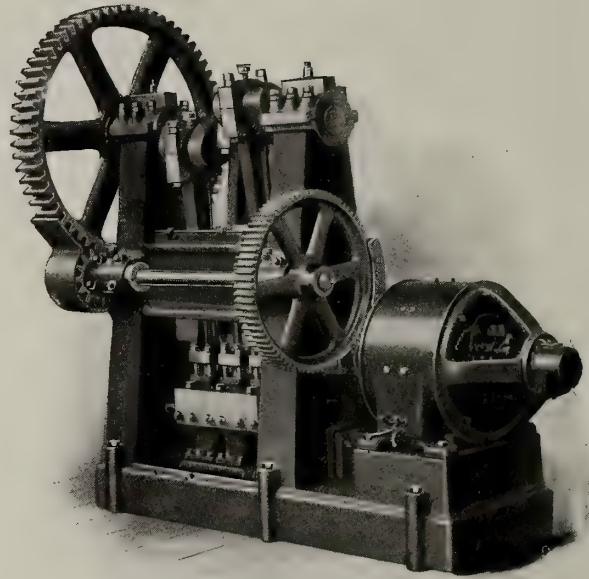
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Hydraulic Presses, Pumps and Accumulators



For all
purposes
where
pressure
is
required.



We are the largest manu-
facturers of this class of
machinery in Canada.

Bulletins sent
upon request.

Canadian Boomer & Boschert Press Co., Limited

18 Tansley St.

Cable Address : Pressco

MONTREAL

A decorative border surrounds the central text area, composed of various mechanical parts including gears, wheels, shafts, and bearings, arranged in a repeating pattern.

To the Power User

—and to you who buy transmission equipment for that power—here's what

Dodge Service means:

¶ It means that you have at your command the output of the *largest works in the Dominion of Canada* exclusively devoted to the manufacture of power transmission machinery.

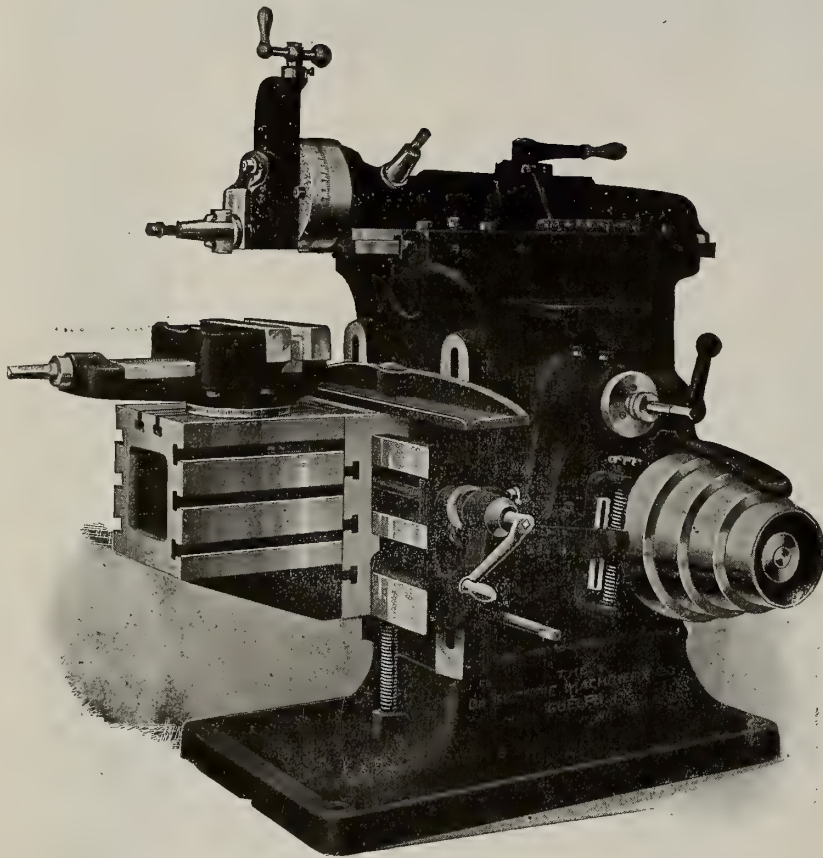
¶ It means that you are able to draw from the *largest stocks* at Toronto and Montreal and at distributing centres from coast to coast.

¶ It means that Dodge machinery is a *complete standardized line*, all parts interchangeable, and you are able to get deliveries at a moment's notice.

¶ Thirty years of engineering and practical experience combined with the largest and most modern manufacturing facilities assures the buyer of DODGE Transmission machinery of a quality in materials and manufacture that cannot be equalled.

Dodge Manufacturing Co., Limited, - Toronto

(8)



SEND FOR CATALOGUE

If you want a machine that will stand up under the heaviest kind of work, send for the description and specifications of our

SHAPER

It is accurate, reliable and capable of sustaining the wear of continuous operation.

MADE IN CANADA

The
**D. McKenzie Machinery
Company**

GUELPH - - - ONTARIO

Eddy's Matches

Buy matches as you would any other household commodity — with an eye to full value!

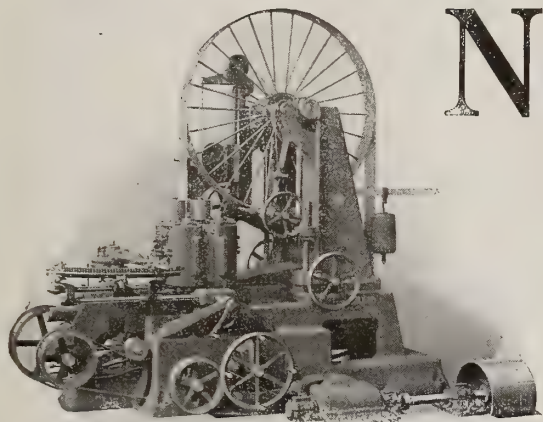
When you buy EDDY'S Matches, you receive a generously filled box of SURE, SAFE LIGHTS.

ASK FOR

EDDY'S "SILENT PARLOR" MATCHES



This New Resaw Need Never Stand Idle



Saw Mills, Planing Mills or Factories of even average output find no difficulty in keeping the new

Berlin Type V50 General Utility Resaw

cutting ten hours every day, for its field of usefulness is by no means limited to a single duty, but covers the whole scope of single vertical resawing.

A UNIVERSAL PURPOSE RESAW whose wide range of duty is rendered economical by its exceptionally convenient and easily operated control devices—all concentrated at operator's position and reduced to the least possible number.

New Selective Yield Set Works—a late Berlin idea—enables operator to make either set of rolls rigid or yielding at will
—**Selective Speed Device** gives four speeds of feed, changeable in the cut, controlled by a single hand wheel
—**Tilting Feed Works** for bevel sawing.

If interested in a Resaw that will do *all* of your vertical work, ask us about the Type V50.

Are You "Wise" to What's New in Band Sawing Machinery?

The present year has witnessed many marked improvements in Band Sawing Machinery. New problems have been successfully met in the creation of new machines and in the improvement of older types. To inform yourself of what is new

**Write for our Free Booklet,
"Wisdom Teeth"**

In addition to a concise description of each Berlin Band Sawing Unit, it contains a very entertaining little story of interest to every one engaged in the wood-working business who desires to increase the earnings of his plant. You will be interested in the experience of the "The Something-Wrong Lumber Co."



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FOR
THIS
BOOK
TO-DAY**

MADE RIGHT—RIGHT IN CANADA
Berlin

MACHINE WORKS, LTD., HAMILTON, ONTARIO

SERVICE

is the one test for
TAPS

as it is for all other equipment. Are your taps giving you a satisfactory service? Do they stand the hard work on shells?

Complete satisfaction comes with the use of Butterfield Taps.

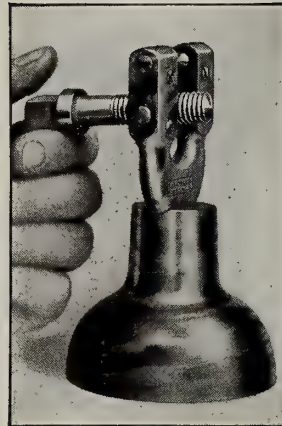
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Economy and Accuracy IN SCREW THREAD GAGING

The upper contact points are set to the maximum size—the lower to the minimum. Lay the screw between the upper points and let it "find its own level." Can anything be simpler?

Varying judgment of individual workmen is entirely eliminated by the use of



JUST RIGHT

WELLS LIMIT GAGES

Send us an outline of your requirements. We will plan the gages for your output.

Wells Bros. Company of Canada, Limited
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Manufacturers of the celebrated *Little Giant* line of
TAPS, DIES and SCREW PLATES, GAGES AND REAMERS



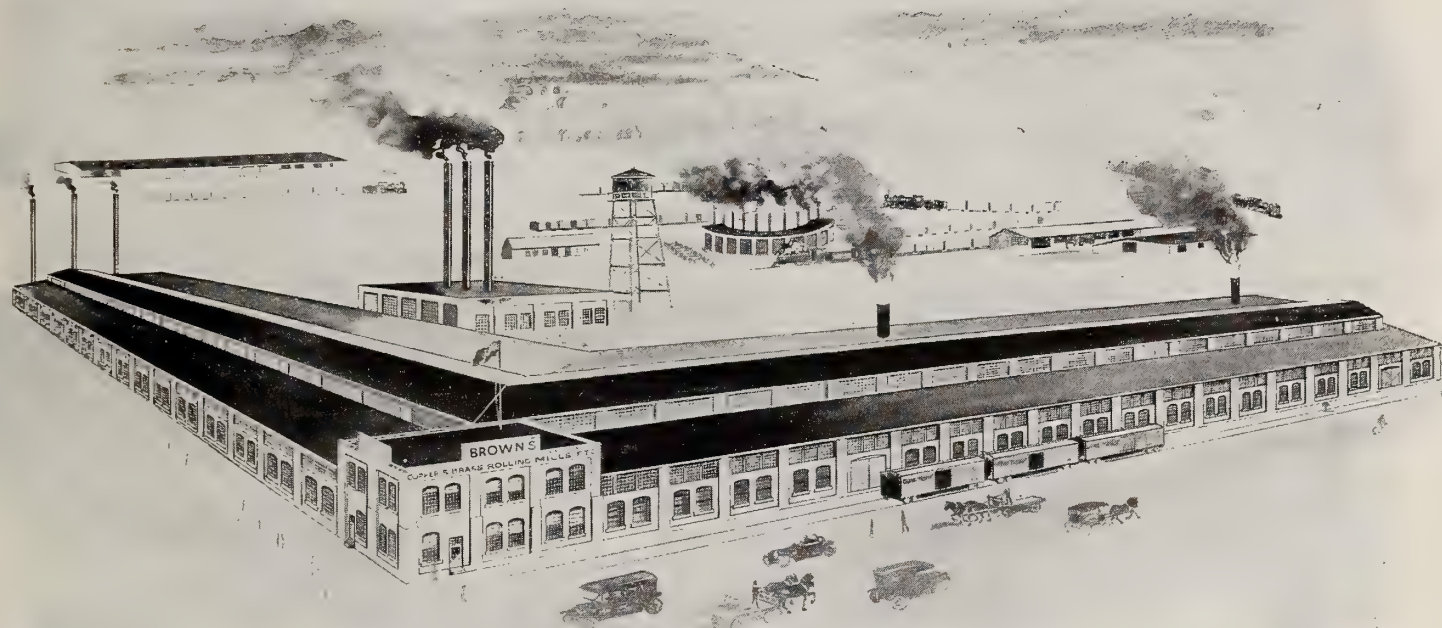
"MORROW"

**Set and Cap Screws and Twist
Drills are the Best Obtainable**

If you give your customers "MORROW" product all through *you will be sure to give them satisfaction*, and will be sure there will be no dissatisfaction.



JOHN MORROW SCREW & NUT COMPANY, Limited
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BUY YOUR BRASS RODS, BARS AND SHEETS WHERE QUALITY AND SERVICE ARE BEST

We are rolling Brass Rods, Bars and Sheets in our new plant at New Toronto.

For months we have been running to our capacity day and night.

The most exacting tests have been applied to our products. Every pound of brass which is used in the making of war munitions is subjected to the closest examination by Government inspectors.

Whatever your requirements are they can-

not demand a finer product than that which we are producing. Our factory and equipment are complete and unexcelled. Over 400 skilled workmen carry through the necessary operations.

Let us quote on **your** requirements. It will be to your advantage to get your supplies in Canada from a Canadian mill. You will be independent of foreign conditions.

For Drilling and Free Turning Order "Beaver" Brand Rod

Brown's Copper and Brass Rolling Mills New Toronto

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STANDARD RETURN TUBULAR BOILER

We make boilers of all kinds for any service.

We are also sole Canadian makers of Erie City Water Tube Boilers, Vertical and Horizontal.

The large number of pleased and satisfied owners of "INGLIS" Boilers is our best advertisement.

For (52) fifty-two years our boilers have been the standard. We have installations of our different types of boilers, which our representatives will be pleased to show to prospective purchasers. Write us for prices, etc.

INGLIS' PRODUCTS ARE "MADE-IN-CANADA"

The John Inglis Company, Limited

ENGINEERS AND BOILERMAKERS

14 Strachan Avenue

Toronto, Canada

Ottawa Representative: J. W. ANDERSON, 7 Bank Street Chambers



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NINE HUNDRED SHEET

Is unsurpassed for superheated steam joints.

It is equally well adapted to air, acids, ammonia,

Or any severe condition where sheet packing is required.

It is made of the highest quality of long fibre asbestos,

And is built up into sheet form under tremendous pressure,

Thus securing great toughness, flexibility and tensile strength.

It is not affected by extremely high pressures and temperatures,

And does not require following up after gaskets have been applied.

Joints can be opened as often as desired without injury to gaskets.

This sheet is furnished in all thicknesses from $\frac{1}{64}$ inch to $\frac{1}{4}$ inch.

Gaskets of all shapes and sizes can be cut by us from Nine Hundred Sheet.

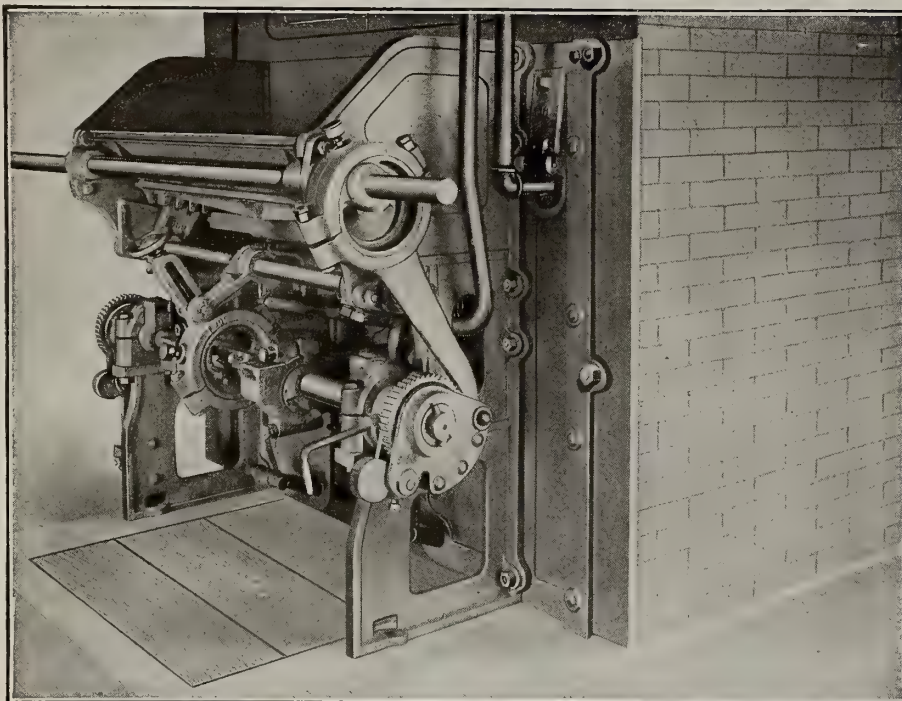
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HAMILTON, ONTARIO

Branches:

Montreal, Quebec	342 St. James St.
Toronto, Ontario	404 Continental Life Bldg.
Winnipeg, Manitoba	Galt Bldg.





No. 4807, Fulton Watercooled Stoker Under an H. R. T. Boiler. Flush Front.

THE HARE ENGINEERING COMPANY LIMITED

HEAD OFFICE : 115 KING ST. EAST, TORONTO, ONTARIO

LOWER FUEL COSTS
BY INSTALLING THE

FULTON STOKER

Some of the recent installations in Canada :

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The above aggregate 3,010 H.P.

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A POSTCARD WILL BRING IT

MADE IN CANADA
15,000 H.P. IN USE

Sales Agencies :

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Patented 1909



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leaking packing boxes on your
Radiator Valves, spoiling floors, ceil-
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KERR PACKLESS RADIATOR VALVES

this can all be avoided.

Specify these valves for your office,
house or factory heating, and you will
not regret it.

THE KERR ENGINE CO., Limited
Valve Manufacturers • WALKERVILLE, ONT

THE MUELLER LINE

of reducing and regulating valves stands
without an equal in variety, efficiency
and wearing qualities. Every
regulating problem is solved
by this unequalled line.



13160

The 13160 is the greatest all-around valve
on the market.

Ask us for No. 5 Catalog.

H. MUELLER MFG. CO., LTD.
SARNIA, ONTARIO



When Cramped for Room—

**USE
WATEROUS
VERTICAL
BOILERS**

Where you're cramped and squeezed for floor space, you can't beat vertical boilers. And where you want vertical boilers, you can't beat Waterous Vertical Boilers.

They come in two styles—Submerged Tube and Full Length Tube. We recommend the latter.

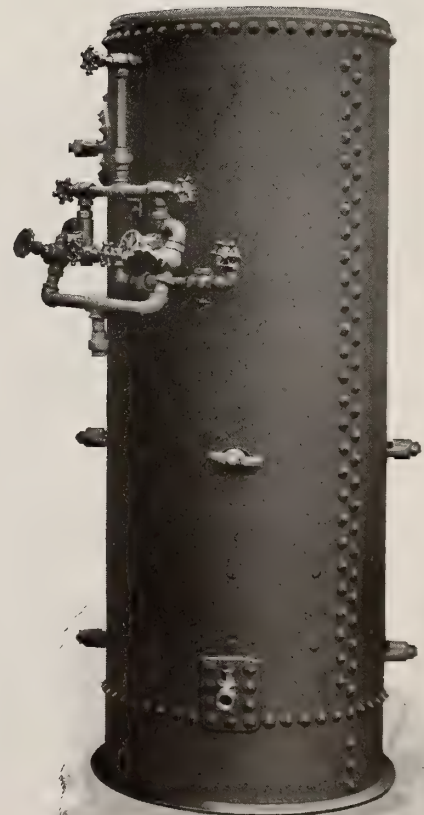
Both styles supplied in 11 sizes, from 6 to 50 H.P.

You may find other makes that cost less at first, but none as cheap in the long run.

They're better built than required by law.

**The Waterous Engine
Works Co., Ltd.**

BRANTFORD, CANADA



Your Boiler Room

is where large profits can be made by installing a

Jones Underfeed Stoker

It is a **BIG** paying investment in the **SMALL** plant.

It is a **BIGGER** paying investment in the **LARGER** plant.

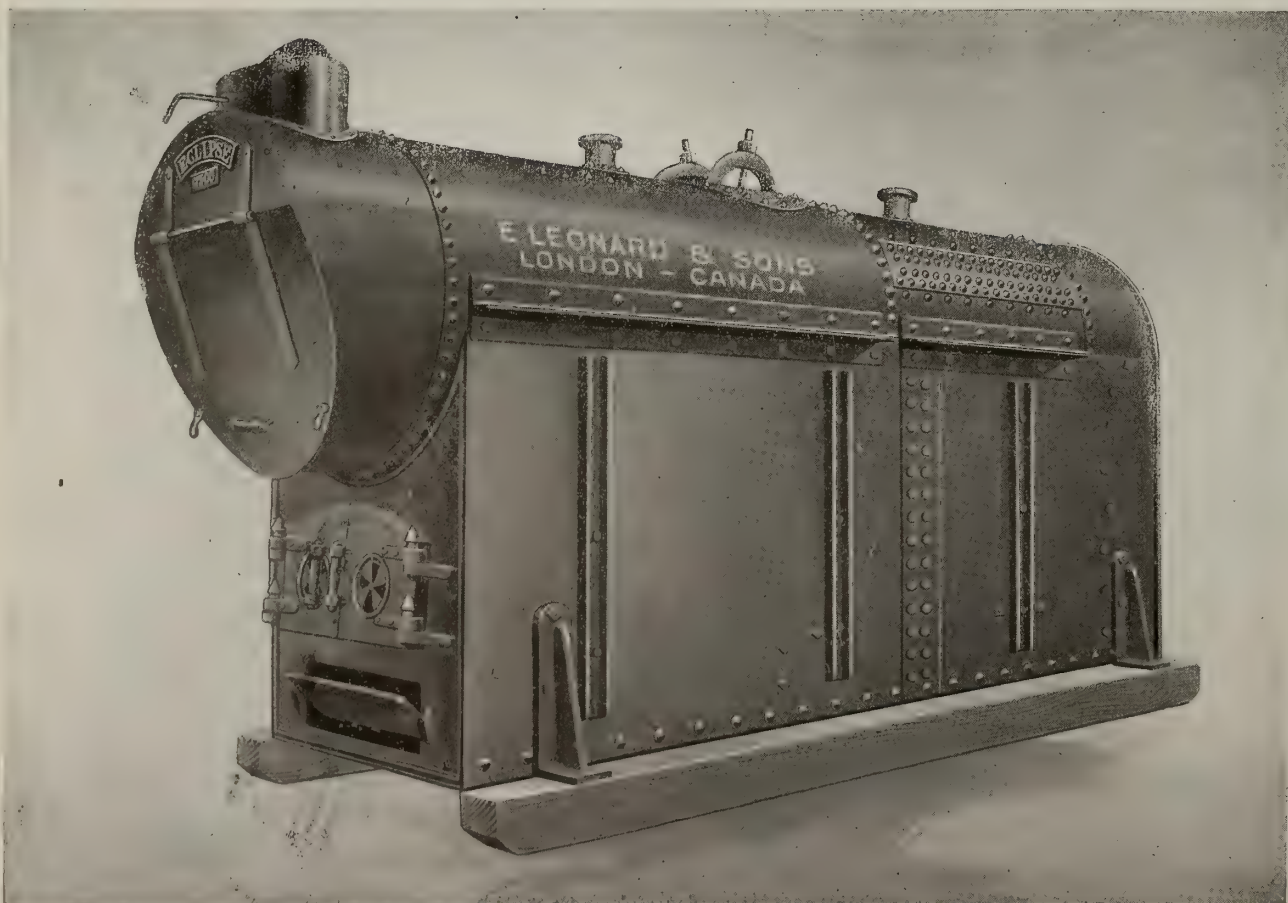
Fuel saving from 15% to 25% interests most steam plant owners.

Hundreds of **JONES STOKERS** are to-day making these savings in plants like your own.

Have us report on the cost and merits of equipping your plant. The **JONES STOKER** is made in **Canada** but used everywhere. It is the simplest stoker built; fewer parts and none moving in contact with the fire; no grates; no losses through grate bars; no smoke.

May we send you descriptive booklet?

JONES UNDERFEED STOKER COMPANY, LTD.
NATIONAL TRUST BUILDING TORONTO



Branches:

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Montreal

62 Water St.,
St. John, N.B.

Box 1315,
Calgary, Alta.

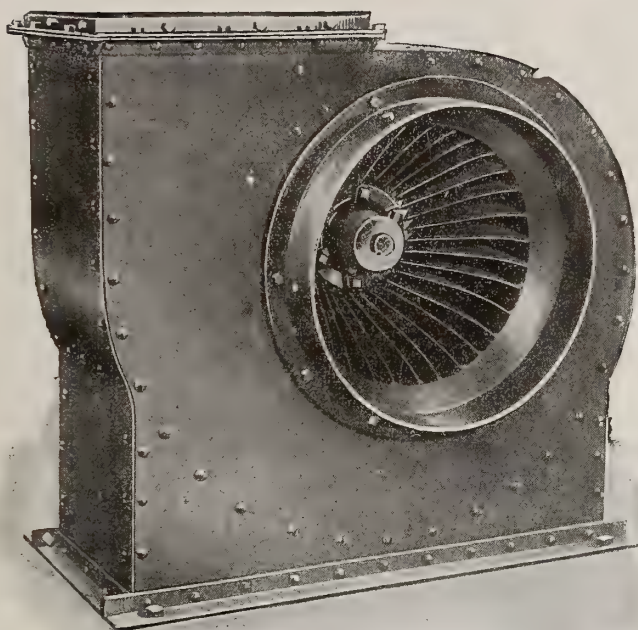
Vancouver, B.C.

567 Banning St.,
Winnipeg, Man.

**E. LEONARD
& SONS**
London,
Canada

Eclipse Semi-Portable Return Tubular Boiler, saving brick work. All Sizes.

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Keith Fans

For Heating and Ventilating

When it comes to a question of Heating and Ventilating the Factory, Church, School or Public Building, it is imperative that you should select the best and most approved system. The "**Keith**" Fan is specially distinguished for giving greater volume with less power than any other Fan made. Get our Keith Fan Catalogue No. 55 and judge for yourself.

SHELDONS LIMITED - GALT, ONTARIO

Toronto Office—911 KENT BUILDING

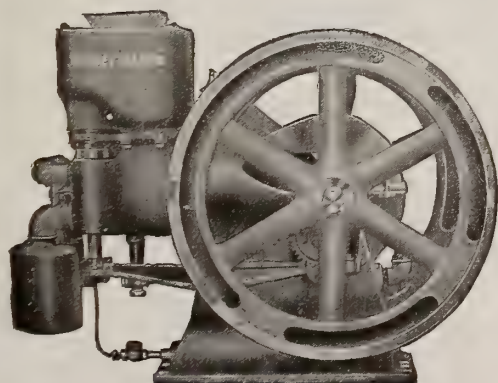
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 Messrs. WALKER'S, LIMITED, 259-261 Stanley Street, Winnipeg, Man.
 Messrs. GORMAN, CLANCEY & GRINDLEY, LIMITED, Calgary and Edmonton, Alta.
 Messrs. ROBERT HAMILTON & CO., LIMITED, Bank of Ottawa Building, Vancouver, B.C.

GASOLINE ENGINES **MASSEY-HARRIS** DIRECT-CONNECTED PUMPS

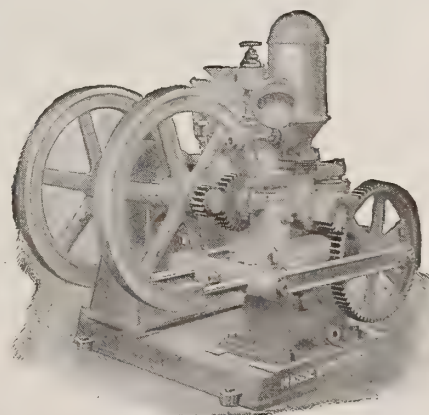
THESE Engines represent the very best type of Gasoline Engine construction. They have been developed to their high state of efficiency by those whose life work has been the designing and building of Gasoline Engines.

Their high efficiency, coupled with their economy of operation and durability, combine to make Massey-Harris Engines, without exception, the most reliable and satisfactory on the market to-day.



FOR THE CONTRACTOR

Engines, Pumps, Hoists,
 Dump Wagons, Dump
 Carts, Dump Boxes,
 Teaming Gears, Lorries,
 Grading Plows, Sleighs
 ETC.



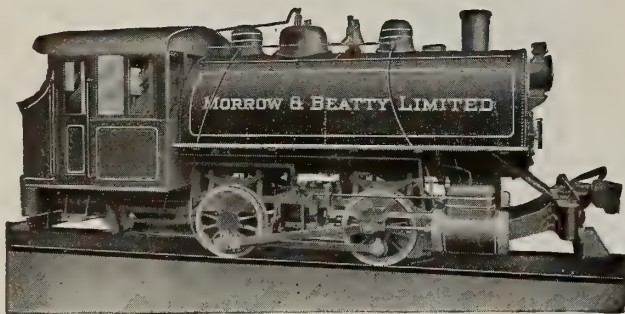
Stationary or Portable
 1½ to 20 Horse Power.
 Maximum Power with
 Minimum Consump-
 tion of Gasoline.

MASSEY-HARRIS CO. LIMITED

HEAD OFFICES, TORONTO
 Branches at: Montreal, Moncton, Winnipeg, Regina, Saskatoon
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 AGENCIES EVERYWHERE

Cylinder Pumps and
 Diaphragm Pumps,
 Stationary or Mounted
 on Truck—Reliable
 and Efficient.

INDUSTRIAL LOCOMOTIVES



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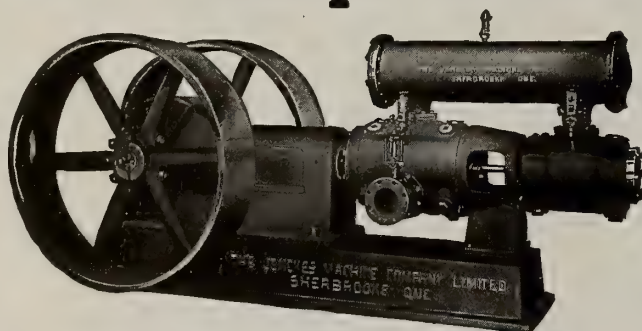
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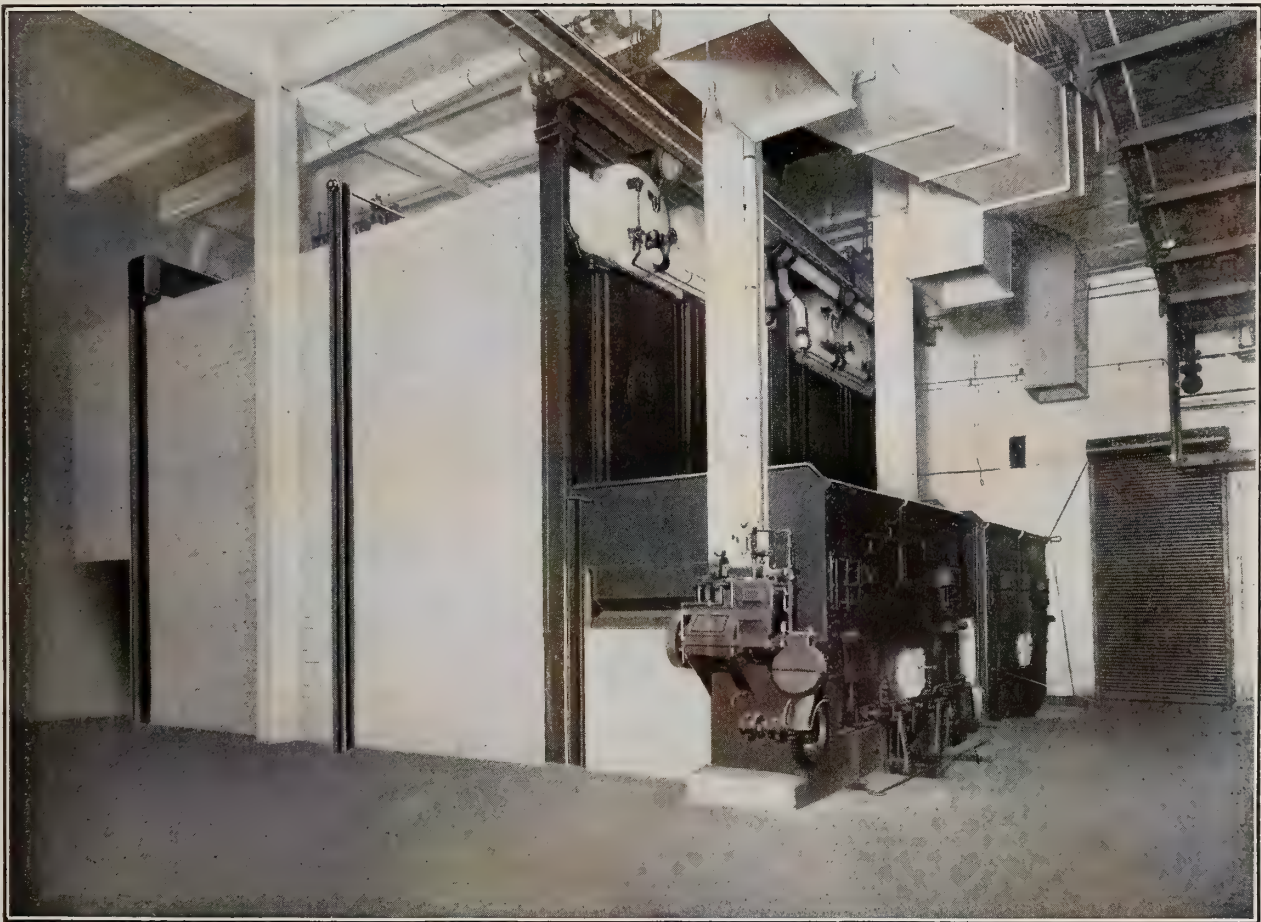
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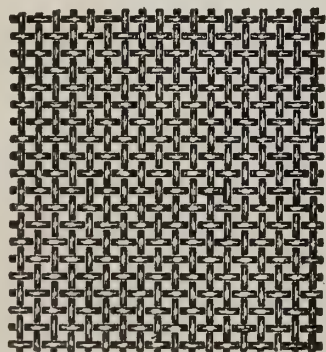
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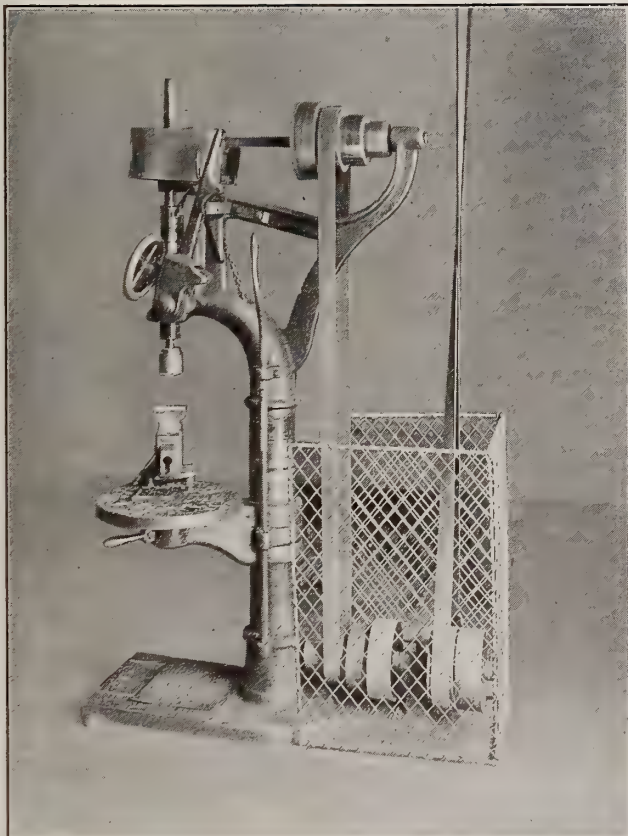
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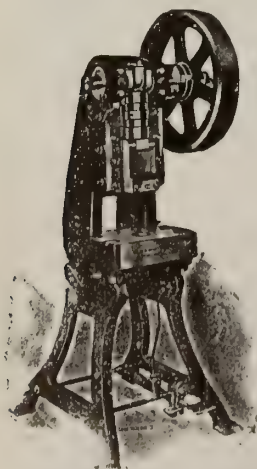
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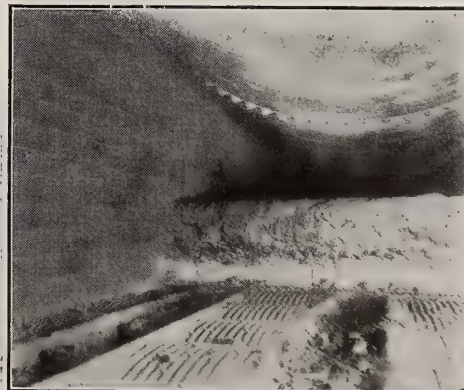
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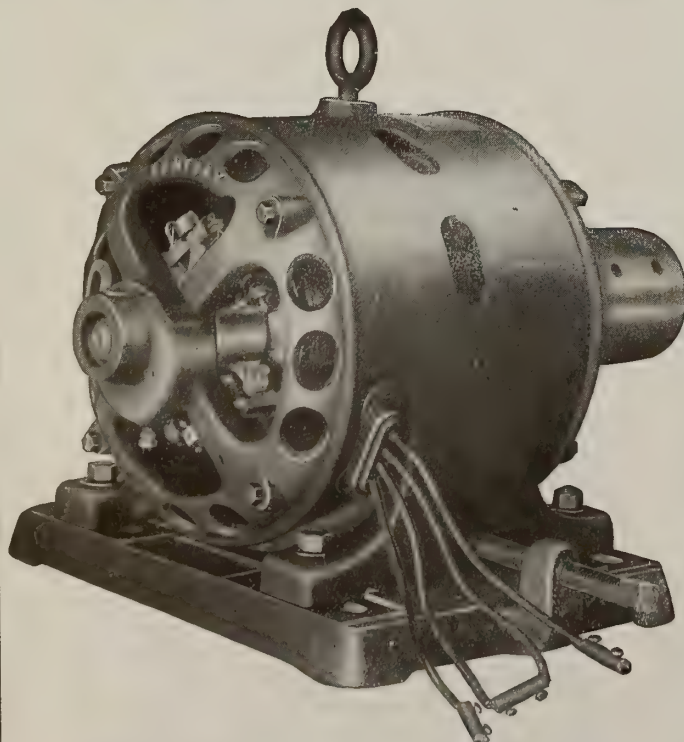
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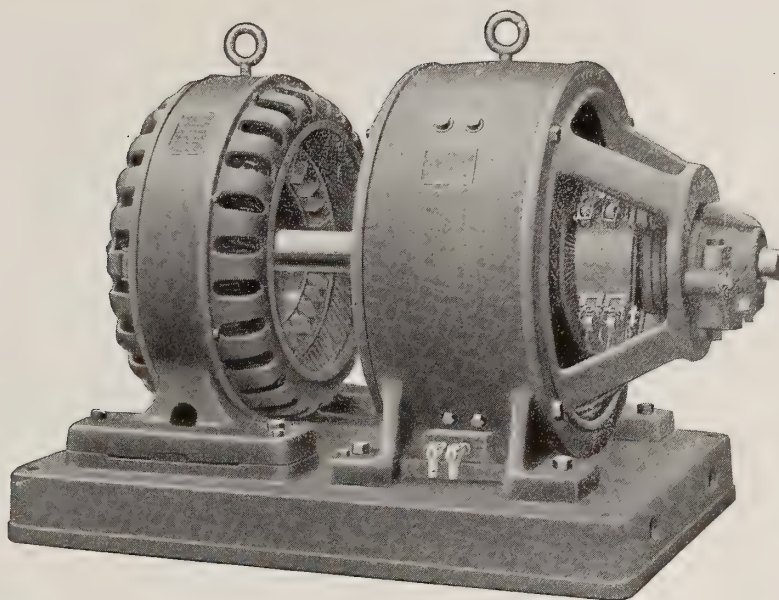
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The Folly of Indiscriminate Recruiting.

IN setting out to raise, equip and maintain an army of 500,000 men, Canada is tackling the biggest job she has ever been up against. INDUSTRIAL CANADA believes she can do it, that her pride and self-respect will never allow her to fail in the accomplishment of what she has undertaken to do for the Allied cause. But if she persists in her present method of enrolling every eligible man who offers his services, regardless of the part he plays in our scheme of economic production, she will make needless sacrifices in attaining her object, sacrifices that by their very uselessness will weaken the cause they are intended to serve, instead of strengthening it.

If the City of Ottawa were threatened by a conflagration of such enormous proportions as to necessitate a general call for volunteer fire-fighters, it would be the veriest folly to allow engineers to leave their post at the pumping station in order to handle a nozzle in the danger zone. The pumps might be miles away from the scene of the trouble, but they would still be the heart and centre of all the forces marshalled to control the fire. Deprive those pumps of the brains and skill of the trained engineer and the army of nozzle handlers would soon be impotent.

The producing machinery of Great Britain, France, Russia and our other Allies is like one enormous pump, by means of which the men who are fighting the European conflagration are kept regularly supplied with all the materials necessary for their work. It is perfectly plain to every thinking Canadian that that pump must be kept operating at top speed; there must be no breakdowns due to some part of the mechanism getting out of gear. But how in the name of common sense can we hope to keep the machinery in smooth working order unless we keep at their jobs the men who know what needs to be done and the proper way of doing it?

Indiscriminate recruiting may have been a good enough policy for Canada when she had in view the raising of an army of only 100,000, but that same policy is fraught with real danger now that she has raised her bid to 500,000. It would be idle to belittle the need for more men at the front, but it would be criminal negligence not to make sure of leaving at home those who could be depended upon to keep the men at the front clothed, and fed, and supplied with bullets.

By way of deriding any complaints at this stage, military men tell us that Canadians haven't begun to realize the sacrifices they may ultimately be called upon to make in seeing this war through. Granted that be correct, is it not all the more reason why we should make it a matter of national business to expend our energies and our resources wisely, so that we will be the better able to make sacrifices when the time for them arrives?

Nationalized Team Work.

WE Canadians are all in this war, whether we realize it or not. It's a clear case of fight or pay. Only a few of us have so far begun to fight. A great many more of us will probably soon have to fight. Those who stay at home will have no alternative but to pay, and when the bills begin to come in some payers at least will wish they had chosen to fight instead.

The surest way to win the war, and to win it quickly, is for us all to offer our services to the State, and to make that offer now. In the end every one of us will be working for the State anyway, and the sooner we begin to do it intelligently, and get down to real team work, the sooner we will commence to see results.

Conscription has an ugly sound. As individuals we don't want it, and certainly the Government doesn't want to force it on us. But we're fighting a country that has conscription, that brought itself to a state of preparedness by means of conscription, and that owes the wonderful results it has thus far achieved mainly to the fact that through conscription it was able to utilize the services of every one of its subjects to the best possible advantage.

Whatever we may think of Prussian principles and Prussian methods, we may as well admit that through the whole-hearted co-operation of all her people, Prussia has been enabled to get results such as we have never been able to show. On our side we have all the potential advantages that superiority in men, money and materials should confer, but by our delay in properly organizing and fully utilizing those resources we are deliberately placing ourselves under a dangerous handicap.

Autocracy, which we despise, would move swiftly and effectively in correcting such a situation. Democracy, which we worship, is moving slowly; with what measure of effectiveness remains to be seen. If we refuse to submit to autocracy and conscription, just because it is autocracy and conscription, then it's for us to vindicate democracy and volunteer service, by showing that it can produce at least equal results.

Why not work it out on some such plan as the following? Let the Governor-General, in the King's name, issue a proclamation inviting every man of eighteen years or over to offer his services to the State. Let it be understood that enrollment offices will be opened in every city, town and county, where those who are willing to serve may register their names, ages, occupations, etc., and be given a badge or armlet to mark them out as men who have answered the call. Let there be a Board appointed in connection with each enrollment office, consisting of perhaps a Judge as Chairman, an officer of the Militia, and one or two others, to consider each man's case, and assign him to the class of service which his peculiar qualifications best fit him for, whether that service be overseas, home defence, some form of production, or anything else essential to the conduct of our national affairs in war time.

There may be, probably are, better plans, but any plan is better than no plan.

Local Initiative May Force Government Action.

FAILING the initiation of some national plan, with governmental authority behind it, we shall probably see local plans put into operation to serve local ends.

Manufacturers for example cannot be expected to remain passive under a system that, by robbing them of their indispensables, will sooner or later compel them to let their fires out and turn the key in the door. Farmers on the other hand are certain to chafe if they are prevented from profiting by the present era of high prices, through the enlistment of all their hired help. It won't improve matters any for the manufacturer if agricultural production falls away, nor will it improve matters for the farmer

if some of our factories are forced to close up. If sacrifices are to be made, they ought to be so regulated as to weigh proportionately on all classes, and all localities. Under a national scheme this even balance could be fairly well maintained, but under local schemes there are certain to be jealousies and inequalities.

Already, in some industrial centres, manufacturers are assisting recruiting and at the same time protecting their businesses by providing the military authorities with lists of their employees, showing each man's age, occupation, street address, nationality, etc. Those whom they regard as indispensable are marked in one way; those whom they regard as important but who might, nevertheless, be spared in an emergency are marked in another way. Those not marked at all constitute a first working list for the use of recruiting officers; those marked as important will not be appealed to, until after the possibilities of the first list have been exhausted; those designated as indispensable will be held as a final reserve list, and are meanwhile being advised to remain at their posts, should they offer to enlist.

This particular plan was evolved as the immediate result of a recruiting campaign centred upon factory employees. The manufacturers who co-operated in it are to be commended alike for their public spirit and their far-sightedness in protecting their business interests. But why, it may reasonably be asked, should the persuasive arguments of recruiting officers be concentrated upon the factory employees of any town when in that same town are plenty of retail clerks, bank clerks, insurance clerks, builders, teamsters, and street railway men who would make just as good soldiers? And furthermore, why should that particular town, just because its people are patriotic and public-spirited, be allowed to make sacrifices out of all proportion to those that are being made by an adjoining municipality, whose people lack public spirit and patriotic fervor?

A national register is the thing, no matter from what angle the question is viewed. Even from the angle of politics, a stand in its favor ought to be splendid tactics, for who could successfully oppose it, who would dare to oppose it? Moreover, who would not be prepared to overlook the shortcomings of a Government that showed itself sufficiently alive to the situation to employ some such means of bringing to bear the whole military and economic strength of the country, in order to ensure and hasten the successful termination of the war? And on the other hand, who would enthuse over a Government that delayed action on a matter so vital to our ultimate success? It's worth thinking over, Mr. Politician.

Light at Last!

THROUGH the maze of perplexities that have beclouded the question of jurisdiction in the matter of company incorporation, some glimmerings of light are at last beginning to appear. To define those glimmerings in legal phraseology would probably evoke a comment that the

situation was as clear as mud, but a happy illustration, employed by Counsel for the Provinces in the argument of the Bonanza Creek Mining Company appeal before the Privy Council, readily enables the lay mind to comprehend the solution towards which we appear to be working.

Imagine Canada to be a house of nine rooms, each room tenanted by a Province. Within its own room each Province is at home, and is consequently master therein. It may be accorded access to other rooms, at the pleasure of the masters of those rooms, but it must conduct itself in accordance with the rules and etiquette which its hosts have prescribed. Canada, however, is the proprietor of the house; it has the right of entry to every room, and moreover possesses a master key that opens the door to every room.

Applying this to incorporated companies, it means that one with a provincial charter has rights only within the boundaries of the province which created it. Outside that province it has what might be called capacity; that is to say, it is inherently capable of carrying on business, but without the right to do so, except by permission. That permission it may obtain by applying for a license; given a license, its capacity is translated into right. A company with a federal charter on the other hand has both right and capacity in every part of the Dominion, and no provincial enactment can in any way deny its capacity or impair its right.

All of which, be it understood, is not actually determined, but simply by way of being determined. With their customary adroitness in assisting the Privy Council to side-step the constitutional issue, Counsel for the Provinces *assumed* the situation to be as here outlined. With that assumption staring them in the face, the Privy Council may reasonably consider themselves relieved of any necessity to confirm it in their judgment, in which event the way will be left open for other Counsel, at some future time, to adopt a different line of argument. So we're not out of the woods yet.

A Peculiar Predicament.

IT may be taken for granted, of course, that in even seeming to surrender rights they had previously defended with tenacity, the Provinces were acting under great pressure. The fact of the matter is that they found themselves in a tight corner over this Bonanza Creek Mining Company appeal. They wanted to attack the John Deere decision, and they also wanted to have the questions in the Companies Reference answered in their favor. But above all they had to win their appeal, otherwise their charters would be worthless outside the incorporating province. Apparently the only chance they had of winning was to make a very important concession in favor of the Dominion. The situation was an exceedingly delicate one, and its explanation makes interesting reading.

The Bonanza Creek Mining Company was a company with an Ontario charter. Its business was conducted mainly in the Yukon, where it had succeeded in obtaining

certain concessions from the Commissioner, acting as Administrator for the Dominion Government. In the course of time some trouble arose over these concessions and the Commissioner decided to cancel them. This in turn gave rise to an action for damages, which was first tried in the Exchequer Court. The defence set up the argument that the Company's charter, being a provincial one only, gave it no right to carry on business in the Yukon, that such business as it had attempted to carry on there had been illegal, and that to all intents and purposes the company had never even existed in the Yukon, despite the fact that transactions running into millions of dollars had been conducted there in its name.

The Exchequer Court gave judgment against the company. An appeal was taken to the Supreme Court with the result that the appeal was dismissed. Unless the Privy Council could be persuaded to reverse the judgments of the Canadian courts, it meant that all companies operating under provincial charters, who had carried on business outside the incorporating province, were in danger of having contracts voided, claims repudiated and assets confiscated. It meant, moreover, that in future no company would ever dream of taking out a provincial charter unless all its business was to be carried on entirely within the borders of one province.

To prevent such a ruinous decision was obviously a matter of vastly more importance to the Provinces than to contest the right of federally incorporated companies to do business without provincial licenses. Their first care therefore was to win the appeal. To do this they had to establish the fact that the company had a legal status in the Yukon. They could not successfully argue that its charter gave it the *right* to do business in the Yukon; all they could claim for its charter was that it gave the company *capacity* to do business outside of Ontario, which capacity had been eked out and converted into a right by the action of the Yukon Commissioner in granting the company concessions. Inasmuch as the Yukon Commissioner represented the Dominion this line of argument was tantamount to an admission that the powers which the Dominion was in a position to confer upon companies were broader and fuller than were the powers obtainable from any province.

That's why the John Deere decision stands. And that's why a federal charter will always be preferable to a provincial charter, whether the Bonanza Creek appeal is won or lost.

The Course for Dominion Companies to Pursue.

IN the meantime we are met with a very general desire for information or advice on three points, which might just as well be given publicly as privately.

Firstly, what course should be pursued by a company operating under a federal charter with respect to the annual return and the annual fee now being demanded by provinces that had previously licensed it? The answer to this question is very clear—pay no attention to the demand at all. The Provinces clearly exceeded their rights

in requiring that company to become licensed in the first instance. They probably acted in good faith at the time, believing that they were well within their rights, but the John Deere decision has branded their acts as *ultra vires*. For them now to ask of the company that it shall pay them money in order to maintain licenses that were never really necessary, is mere foolishness. And it would be still greater foolishness on the part of the company to comply, lest that compliance be construed as the surrender of a right which the Privy Council's judgment showed the company to possess. These renewal fees, of course, are usually small, and some federal companies might prefer, on the ground of expediency, to pay them, rather than have any trouble. In that event they should certainly be paid under protest.

Secondly, is there any likelihood that the Provinces could be made to refund to federally incorporated companies such monies as they have illegally collected from them under the form of licenses and renewal fees? We think there is, but we think action on this point should be deferred pending the judgment in the Bonanza Creek case. The right of federal companies to recover will not be prejudiced by the slight delay involved; on the other hand the Privy Council's judgment may clarify the situation in a way that would improve the chances for success in an action to recover.

Thirdly, what is there to prevent the provinces from evading the issue by dropping their demand for licenses and imposing taxes instead? If they cannot get after Dominion companies under their Companies Acts, may they not come at them under their Assessment Acts? They may do so, of course, if they want to, but in the process of taxing they will have to avoid anything that savors of discrimination. If they decide to tax corporations as corporations, they will have to tax all corporations. It would be unlawful for them to single out Dominion companies for such treatment; they would necessarily have to include within the scheme even such companies as they themselves had chartered. And that wouldn't incline business men any more favorably towards provincial charters, which is the main object the Provinces are aiming at.

Everything considered, the laurels are thus far all on the side of the Dominion, and the Provinces may as well recognize that fact and bow to the inevitable.

The Grain Growers and the Manufacturers.

AT the annual meeting of the Manitoba Grain Growers Association, held about a month ago, the President, Mr. R. C. Henders took occasion to refer to the conference held in November, 1914, with representatives of the Canadian Manufacturers Association. The meeting, he said, was somewhat unique in character, and if renewed, and conducted without any selfish ulterior motive, ought to and doubtless would result in great good.

Mr. Henders emphasized the fact, however, that the farmers of Canada were not to be trifled with, and that unless there was an honest desire, made very clear on the

part of all concerned, for the frankest and fullest discussion of the problems under consideration, in order that justice might be done to all, then the representatives of agricultural interests would see to it that the continuance of special privileges to manufacturers, whereby they were enabled to exact an unjust toll from the consumer on every article they turned out, would not be tolerated.

Up to this point we take no exception to Mr. Henders' views. There may be, doubtless are, some manufacturers who are exacting an unjust toll from the consumer, a toll which perhaps the customs tariff has made it possible for them to collect, but the Canadian Manufacturers Association has no sympathy with such practices, and is taking action every week in the year to make it increasingly difficult for such men to continue in business. These men are the exceptions, not the rule among manufacturers, and in condemning the class because of the shortcomings of the individual, Mr. Henders is just as unreasonable as the Canadian Manufacturers Association would be if it were to characterize all farmers as dishonest just because some of them may be in the habit of putting the best apples on the top of the barrel.

Continuing Mr. Henders said:—"For some time my faith has been somewhat shaken in the sincerity of at least some of the promoters of these conferences. The Manufacturers Association, as represented by their committees (or perhaps their committees did not represent the view of the Association) came to a clearly defined understanding with regard to a line of action and made appointment of a joint committee to interview the Government. That committee presented their case, one of the very important features of which case was, that we memorialize the Government to appoint a commission to make a full investigation into the cost of production in the three great industries of manufacture, commerce (including transportation) and agriculture, *that if need be a physical valuation be placed on all plants involved and a reasonable amount be allowed for profit in every case*, and that whatever was the cause of the financial depression and unrest, such cause should be stated and a remedy sufficient and equitable provided. In this suggestion we thought that we had made some progress and that by this time we would have seen our way clear to a satisfactory solution of some of our difficulties. Imagine the surprise we received when we ascertained that a commission was appointed and that in looking over the work assigned to the said commission, there was not the slightest intimation given that the work assigned to them was along the line suggested by the conference I am trying to describe.

"One thing is certain that the farmers were not consulted in any way, as to the personnel of that commission, nor yet as to the nature or scope of their investigations. To any one who will take the trouble to investigate it will be very apparent that on the most important point on which the joint committee gave a suggestion that might, if acted upon, be fruitful of results, that suggestion was ignored, and the possibility of investigation along that line was absolutely precluded."

If Mr. Henders will permit us to correct him, the memorial presented to the Government and signed by himself contained no such statement as that shown above in italics. Whatever the views of the farmer may be, as to his right to make a reasonable profit from his labor whether he does his work intelligently and efficiently or not, no manufacturer asks or expects that he be guaranteed a reasonable profit. When he goes into business he takes a chance; he may make a bare profit, or he may make a good profit if he has plenty of brains and is lucky; on the other hand he may lose his money altogether. If the consumer of this country had to pay prices that would ensure a profit to everybody who goes in for manufacturing, including those who should have stuck to school-teaching or clerking, he would have much more cause for complaint than he has now.

What the memorial did say was this:—"To whatever extent the tariff is responsible for the handicaps under which the farmer has to labor, it should be carefully studied with a view to its rectification." And later on it contained this statement: "We place ourselves firmly on record as of the opinion that these and all other matters affecting the agricultural interests of Canada, particularly production, transportation, distribution, markets and finance, be made forthwith the subject of a searching investigation by a Committee or Board to be appointed . . . by the Federal Government, that Committee or Board to be comprised of non-partisan men of outstanding ability, broad experience, high ideals and unquestioned probity, for the purpose, first, of acquainting themselves with the needs which exist; second, of evolving and submitting to the Government a plan . . . calculated to meet those needs; and third, of putting that plan when approved or amended into execution."

Mr. Henders complains that the farmers were not consulted either as to the personnel of the Commission or the scope of the investigations to be entrusted to it. It may be some consolation for him to know that the manufacturers were not consulted either. We were under the impression, however, that the Commission's instructions were sufficiently in line with the recommendations in our joint memorial as to give both sides cause for congratulation.

Types of Advanced Labor Legislation.

THOSE who are disposed to view kindly the labor movement in Canada, and to extend it a helping hand, should not forget to keep a watchful eye on the trend of organized labor's policy in the United States. Many, if not the majority, of Canadian locals are affiliated with unions having their headquarters across the border, while the Trades and Labor Congress of Canada is of course affiliated with the American Federation of Labor. Under such bonds of sympathy it is fair to surmise that legislation asked for by labor interests in the United States will sooner or later be reflected in the legislative demands put forward by organized labor in Canada.

An interesting sample of the kind of thing this country may some day be up against is thus referred to in a bul-

letin issued by the National Council for Industrial Defense:—

"In the 62nd and 63rd Congress measures were proposed to make it a misdemeanor for any officer of the United States to use any time-measuring device to fix the task of the public employe or pay or recommend the payment to him of any premium or bonus. By amendment of the Military and Naval Appropriation Bills it was provided, in the concluding days of the last Congress, that no portion of these appropriations should be used to pay the salary of any officer who did the above things.

"It is announced that the labor organizations will not only endeavor to procure like amendments to the same appropriation measures in the existing Congress but will also demand that the government shall stipulate in its contracts for military and naval supplies that no portion of the work upon such contracts shall be done by mechanics or laborers operating under such so-called efficiency systems."

Apparently the National Council for Industrial Defense is accustomed to kill a few measures like this every morning before breakfast, for the bulletin from which the above is an extract treats with similar brevity of seventy-five other bills, not all labor measures, but all of real importance to business men.

The "Iron Age" however takes a more serious view of the labor lobby to put this measure through, as witness the following from one of its editorials:—

"The determination of the Administration to ask an increase of approximately \$150,000,000 in the military and naval appropriations, a large part of which will be spent for material to be made either in Government or in private shops, has spurred the labor leaders to employ extraordinary measures not only to hold the advantage gained at the last session, but to improve it materially by extending the prohibitions incorporated in the Army and Navy Bills to the Fortifications Bill and to increase the restriction in a drastic manner that will affect every private manufacturer doing Government work.

"It is now proposed not only to provide in the three great budget measures, which this year will carry close to a half billion of dollars, a specific prohibition against the employment in Government establishments of the Taylor and all other systems involving time-studies and premium payments, *but also to demand the enactment of a provision requiring the insertion in all Government contracts for ships, guns, forgings, and all other material, of a clause stipulating that none of the work shall be performed under these systems or in shops where they are in use.* The germ of this idea originated in the campaign for an eight-hour day, which resulted in the restriction of work done by contract for the Government to establishments operating on an eight-hour day basis. The object in view is both to deprive establishments employing scientific shop management of Government work, and to create sentiment against the Taylor and other systems by putting the Government in a position of appearing to oppose them."

Now here is the real conundrum:—If the campaign for an eight-hour day will hatch a proposition to suppress scientific shop management, what kind of proposition will be hatched by a campaign for a six-hour day? At the American Federation of Labor Convention, held in San Francisco last November, a Committee was instructed to make investigations with a view to determining when a six-hour day could be established in the place of an eight-hour day, so there's no joke about it. They sometimes tell us over in the States that we Canadians are behind the times. We may thank our lucky stars we are back numbers, if agitations like the above are among the penalties we would have to pay for being up-to-date.

High Explosives Needed for the Patronage Evil.

ADDRESSING a meeting of Montreal manufacturers last month, Hon. G. A. Simard, Chairman of the Soldiers' Employment Commission for Quebec, made a strong plea for the abolition of the patronage system. Adverting to the necessity for utilizing every possible channel in an effort to provide work for returned soldiers, he intimated that the Dominion Government, as one of the largest employers of labor, could never fulfil its duty in this regard so long as it adhered to the patronage evil.

"It is only the existence of this evil," said Hon. Mr. Simard, "that prevents the Government from declaring frankly that vacancies in the public service will be reserved for soldiers who have fought for the defence of the Empire. A clean sweep of all incompetents from Government pay lists would open up innumerable positions for those who have won their title on the battlefield, rifle in hand, instead of in election contests, too often bottle in hand."

While the Civil Service numbers on its list many excellent men, upon whom such a statement might reflect unfairly, it also numbers on its list many inferior men who hold their jobs through political pull, despite the fact that more competent men could easily be secured, often for less money. The fact that these men may have claims upon the consideration of those whom they helped to elect is no reason why the country should be called upon to dispense charity to them. And it is charity when they are given pay for work they don't do, and which some of them cannot do.

Our returned soldiers are not looking for charity, they don't want charity, but they do want employment, where they can give a dollar's worth of service for every dollar of pay they receive. Through the Hospitals Commission the Government is calling upon manufacturers to show these men a preference when filling vacancies in their factories. The manufacturers will do it, but they would like to see the Government practise what it is preaching.

To do this, the Government must throw out the patronage system. And while it is housecleaning it ought to throw the patronage list onto the rubbish heap at the same time. The patronage list, as now constituted and utilized, is a farce. When this point was raised recently with a

member of the Government we were informed that the patronage list need stand in no one's way of securing Government business, that anyone could have his name put on it, that there were, in fact, something over 20,000 names on it as it was. If the patronage list is as common and cheap a thing as that, where is the sense of encumbering the routine of office work with it?—What particular object is there in forcing a sale to go through some jobber, just because his name happens to be among the elect, when the same material could be bought direct, and for less money, from a manufacturer whose name through some mischance does not happen to be among the elect?

Under the stress of a great common cause, Russia found courage to eradicate the liquor evil, and now Russia is coming back. Canada should similarly embrace the present opportunity to eradicate the patronage evil; she would be the stronger for it.

Transcontinental Rates.

THE substantial reductions made by Canadian railways in their transcontinental rates have a significance far beyond the gratification they will afford shippers in Eastern Canada and jobbers on the Coast. The saving of a few paltry dollars in freight bills is a mere trifle alongside the larger consideration of new business that is made possible by means of that very saving. Unless we are greatly mistaken, the tariffs now in effect will contribute in no small degree to the commercial unification of the Dominion, by strengthening the trade relations between the East and the West at a time when those relations were sadly in need of strengthening.

Remembering the broad Canadian spirit with which the officials of the railway companies approached the negotiations, it would be unkind to attribute the reductions altogether to the competition with which the railways were faced by the completion of the Panama Canal. At the same time it would be futile to argue that that competition was not a factor, for it was a factor. But had the railways allowed themselves to be influenced by competitive conditions alone, they could easily have justified reductions less generous than the ones they agreed to.

It was future rather than immediate business that the railways were laying their plans to secure. Because of their intimate relationship with every producing industry, and every form of distribution, our transcontinental lines have an interest in the all-round development of the country far out-distancing the interest that any other form of enterprise could possibly have. And the railways know that a country is not being properly or fully developed so long as a portion of its population is subsisting on imported goods who might just as well be subsisting on goods made at home.

Anything that the railways may temporarily sacrifice in the way of freight earnings as a result of the reductions they have put into effect, will, we hope, be more than made up to them by the ever-growing volume of domestic traffic which those rates will encourage.



A City Built of British Columbia Lumber. An Attractive View of a Residential Section of Victoria

LUMBERING INDUSTRY IN BRITISH COLUMBIA

By NORMAN LAMBERT

THE lumbering industry is really the economic backbone of British Columbia. It represents the largest single investment of capital among the industries of the Pacific Coast Province, and in ante bellum days it employed the largest number of persons. And as a national feature, the forests of British Columbia represent one of the most important natural resources in Canada's vast storehouse of undeveloped wealth. When anything goes wrong with the lumbering business at "the coast," therefore, the whole commercial system of the far western province is certain to be affected, and the entire Dominion immediately suffers through any reverse in the development of this great natural resource.

During the past three years British Columbia, and in a lesser degree the sister provinces of the East, have felt the injurious effects of an enforced period of idleness in the lumber mills of the Pacific coast. The era of active growth and construction in the northwestern provinces during the years prior to 1913, stimulated lumbering in British Columbia to a high degree, and induced the lumbermen in that culminating year of 1913, to increase their cut of timber to unprecedented figures. With the end of the national construction period, which brought the collapse of real estate speculation and its accompanying building operations in the prairie provinces, the output of lumber from the British Columbia mills began to diminish, and it soon became evident that the market of the Middle West had been over-supplied. The financial depression from which Canada was just emerging when war broke out, began to be noticed early in 1913, and that condition, coupled with an over-production of building material, created an awkward and acute situation for the lumbering industry in British Columbia. The war, by depriving the port of Vancouver of much of its accustomed ocean tonnage, added another problem to the already long list of difficulties confronting the lumber trade.

To show the actual extent of the lumbering industry in British Columbia in those days when the market was good

in the Middle West, and to receive an adequate idea of the situation in the trade, when the drop came in 1913, a reference should be made to the budget speech delivered in the Provincial Legislature in February, 1914, by Hon. Price Ellison, who since has retired from Parliament. He reported in dealing with conditions affecting the lumbering industry, that the official scaling returns for the year 1913 showed a cut of 1,457,041,939 feet, exceeding all previous records for the province. Adding the amount of timber cut off Crown lands, and the amount cut in the Dominion Railway Belt, the total exceeded two billion feet. The amount of revenue derived by the Province in 1913 from its timber assets was about three million dollars, being relatively greater than that of any other country in the world with the exception of one or two of the German States. Commercially speaking, however, notwithstanding the increased output, the lumber industry was far from prosperous. According to an estimate made by the Mountain Mills Association, consumption in the four western Canadian provinces decreased in 1913 by 450,000,000 feet as compared with 1912. At the same time, production from the mills throughout the same area, which was a market for 95 per cent. of its output, declined only 162,347,000 feet, thus leaving large stocks of lumber on hand still unsold. The entire capacity of the mills in western Canada, Mr. Ellison estimated, was 3,000,000,000 feet per annum, whereas the actual output of those mills in 1913 was 1,827,000,000 feet, or about 57 per cent. of capacity.

In a nutshell, the foregoing statement shows the extent of the home market that was supplied by the lumbering establishments of British Columbia prior to the depression which affected all kinds of trade throughout Canada. This statement relating to conditions in 1913 forms a basis of comparison by which to appreciate subsequent developments.

The milling capacity of British Columbia for the past three years has been much in excess of the demand. Owing to the

great depreciation which occurs in idle plants, a number of mills, rather than close down, continued operations without profit with the hope that conditions would improve. But the volume of business done in the years leading up to 1913 has



**A Mountain Forest. Douglas Fir, Western Red Cedar
Hemlock and Sitka Spruce, 50,000 feet
B.M. to the Acre**

not yet been regained. In addition to the falling off in the home trade, there was the ever present competition of the American lumber industry. Mills in Washington, Oregon, Idaho and Montana were also greatly overstocked by the end of 1913, and they proceeded to dump as much material as possible into Western Canada. Altogether, lumbering in British Columbia sank to a pretty low ebb during 1914, especially following the outbreak of the war in August.

The war, however, has brought to British Columbia that which looks very much like the beginning of a big revival in the lumbering industry. Seriously handicapped as they have been through the loss of tonnage from the port of Vancouver, the lumber men have succeeded in filling several very valuable orders from abroad for railway ties and other materials needed through the wastage of war. The trade in Britain has also been demanding timber supplies from Canada. A recent report from London shows that of sawn wood, deals, battens, boards and ends Canada during 1915 shipped to the Old Country 5,301,000 pieces, as compared with 2,738,000 pieces in 1914. The exports from British Columbia to the United States during the past year have also increased very notably over those of the previous year. The United State Consul at Vancouver issued a report shortly after the New Year showing the remarkable gains that had been made by British Columbia in her export business with the United States during 1915. The following statement is an analysis of the exports of forest products, and it reveals a material improvement in the lumbering trade over the year 1914:—

Wood Products—	1914	1915
Lumber	\$791,772	\$1,711,498
Logs	480,927	895,344
Paper	1,619,095	1,015,030
Poles and piling	125,035	79,040
Pulp	235,971	203,620
Shingles	2,374,151	3,790,763
Shingle bolts	6,634	15,915
Miscellaneous	9,366	.....
	\$5,642,951	\$7,711,210

In addition to this export business, trade in the Middle West has been improving as a result of the successful harvest. Reports from the prairie provinces tell of the increased sales at the lumber yards, thus reflecting a renewed interest in building.

But the future of lumbering in British Columbia will depend on an export as well as a domestic trade. Up till now the bulk of British Columbia's lumber business has been transacted within the four western provinces. Ninety-five per cent. of the output of the coast mills in 1913 was consumed in the West. The total foreign export trade in that year was about 51,500,000 feet, or less than one-tenth of the exportation of lumber from the adjoining Pacific Coast States. In the years to come it will be the task of the lumber interests on the Canadian side of the line to secure a share of that export trade from the Pacific Coast equal to more than one-



**A Wood Stave Pipe Line, for Conducting Water for
Power Purposes at a Mine in Northern B.C.
The Pipe is 6 feet in Diameter**

tenth of the total. It is with this view before him that a representative of the Government is now on a tour of the world investigating the markets of the Far East and in Australia and South Africa. And just the other day, in Van-



Typical Tidewater Saw Mill, with Sailing Ship Loading to the Left

couver, a company was organized to buy or build sailing vessels which will help to supply the present needs of the lumber trade in seizing and developing important export connections.

The ultimate value of British Columbia's forest wealth is inestimable, because her supply of timber, under the care of scientific forestry, is practically inexhaustible. The Forestry Commission in British Columbia estimated the total stand of timber in that province in 1910 at 240,000,000,000 feet, or "half the probable stand of Canada." By a system of adequate protection and careful conservation of the timber areas, it is hoped to maintain that prodigious supply in a state of undiminished permanence. The Chief Forester of British Columbia has stated that within the province 6,500,000,000 feet board measure, is being produced each year in the form of reforested areas; which amount is many times that of the annual cut in the big year of 1913.

Ultimately, when conditions of supply and demand have adjusted themselves, and the lumber industry of British Columbia will have more than the uncertain support of the Western Canadian market, there should be no doubt about the successful development of the latent forest wealth in that province which is now feeling so keenly the stress of hard times. The United States is enjoying the bulk of the export trade in lumber from America just now, but that country in doing so is exhausting its forest supply which two years ago was being cut at the rate of 40,000,000,000 feet per annum. With the aid of a fleet of lumber carriers, British Columbia should benefit in due time by the Panama Canal, which constitutes a very necessary link in a successful export connection between the Pacific Coast of

Canada and the different ports of Great Britain and Europe. Then, lastly, there is our own Middle West, with its present population of nearly a million and a half. It is an insufficient market now for the mills at the coast, but one likes to think of an immigration and land settlement policy for Canada which some day will place nine or ten million people in the middle western provinces. When that time comes, lumbering in British Columbia will have passed out of a period of financial difficulty into a time of prosperity.

MANUFACTURERS IN MUNICIPAL LIFE.

Thomas Doherty, president Doherty Stove Co., Limited, Sarnia, was elected mayor of Sarnia by acclamation.

Clayton E. Hurlbut, president of the Hurlbut Shoe Co., Preston, was elected mayor of Preston at the recent municipal elections.

A. M. Edwards, president of the Galt Stove & Furnace Co., was another manufacturer to be elected mayor by acclamation.

E. R. Dennis, Dennis Wire & Iron Goods Co., London, was elected by a large vote to the Utilities Board of the Forest City. F. G. Mitchell, of the London Engine Supplies Co., is also a member of the Utilities Board.

Frank White, of the London Rolling Mills Co., London, was elected to the Board of Control.

J. B. Beveridge, general manager of the Dryden Timber & Power Co., Dryden, Ont., was elected to the Dryden Council by acclamation.

James Wilson, superintendent of the Thorold Pulp Company, Thorold, headed the polls as alderman.

David F. Robertson, general manager of the Northumberland Paper & Electric Co., Campbellford, Ont., was re-elected reeve by acclamation.



Getting Out the Raw Material. The Timber in this Picture is the Celebrated Douglas Fir

CANADIAN MANUFACTURERS AND BRITISH BONDS

How Can These Securities, when Taken in Part Payment for War Orders, be Utilized to Best Advantage?

By H. M. P. ECKARDT

SINCE the Finance Minister, in his address to the Toronto Board of Trade, in December, made the suggestion that Canadian manufacturers engaged in the war munition business should take a certain percentage of their payments in British exchequer bonds, the proposition has received considerable discussion. It does not appear that there are insuperable objections, providing the transactions do not reach too large a figure. When a suggestion of this nature is put forward it is always advisable to consider it well from the point of view of the practical business men who are or would be directly affected by its working. Let us then analyze the project with a special reference to the position of the several classes of manufacturers who would be expected to take the British bonds. It is necessary that these parties should have a clear idea or knowledge as to the use or uses to which they could put the bonds after accepting them in part payment of orders filled.

First of all, what is the exact nature of the security they would be asked to accept? In all probability the exchequer bonds offered would be the unlimited issue announced in mid-December, in denominations of £100, £200, £500, £1,000 and £5,000, bearing interest at 5 per cent. per annum and principal payable on 1st December, 1920. In connection with these bonds it is provided that when owned by a party who is neither domiciled nor ordinarily resident in the United Kingdom, they shall be exempt from all British taxation present or future. Also the bonds are exchangeable at par into any future loan issued at home at a higher rate of interest by Great Britain for carrying on the war—excepting exchequer bonds, treasury bills or similar short dated securities.

The Case of Wealthy Companies.

From the point of view of the capitalist or investor looking for a safe investment, these bonds have decided attractions. The question is, how can our manufacturers use them to advantage? If the manufacturing concern is very wealthy possibly it might take the bonds and hold them as a fixed investment, as a part of its reserve or surplus capital. For example, apart from the Dominion Government, the Canadian Pacific Railway is probably the strongest and wealthiest Canadian manufacturing concern engaged in turning out munitions. In the two years 1909 and 1910 the C. P. R. bought \$10,000,000 worth of Canadian Government securities; and the item has ever since remained in the balance sheet. Considering that the net revenues of the company are now running well in excess of fixed charges and dividend requirements, and that the capital outlay on new mileage, etc., has been reduced to comparatively insignificant figures, it would appear that the C.P.R. could, without great inconvenience, take British bonds as part payment for the war materials being turned out by its shops. No doubt we shall see in this case an augmentation of the item "Government Securities" above referred to in its balance sheet.

In deciding what proportion of their payment they could take in this form, the directors would perhaps consider the matter in regard to profits made on the business. Providing it did not wipe out or too heavily impair the surplus earnings after dividends, they might decide to invest a large proportion of the profits made on the orders. One could scarcely

expect them to put more than their net profit on the business unless they had capital waiting for investment. The C. P. R., of course, could take the British securities and put them in its treasury—carrying them with its own resources. The bonds would be available in the course of two or three years for realization in the market, if such were required, and would constitute a very high-class reserve.

Less Fortunate Concerns.

This reference to the C. P. R. serves to illustrate how a very wealthy manufacturing concern might proceed. A company or firm completely independent of the banks, making good profits, and having a relatively large surplus of quick assets, could take the bonds and store them in the vault or at banker's as a special reserve. However, it is probably the case that only a small number of Canadian manufacturing concerns could do this. Insufficiency of working capital has always been more or less in evidence with many of our manufacturing units. The manufacturer frequently is obliged to lean extensively on his bankers while purchasing raw materials, working them up and selling his products to the trade. So it will be well to have the article deal mainly with parties who are in such position.

In the first place it is necessary to consider the outlay for new machinery and alteration of plant, representing usually the preliminary or initial stage of the business of manufacturing munitions. This would not apply to all manufacturers—some have been engaged in turning out, on a much larger scale, merely the articles which they have been accustomed to produce. Where there have been heavy outlays for this purpose they would perhaps be represented by liabilities to banks or other parties. These liabilities would require attention before the manufacturer could undertake to do anything of consequence in the way of taking the British securities. It is understood that the manufacturers who have been engaged in war work from the beginning have made considerable progress in wiping out the expenditures on plant, etc.—some of them have wholly paid for the new machines and additions out of profits. That would mean that their floating debts were in satisfactory condition.

A Difficulty for the Banks.

However there would probably be, even in their cases, bank loans representing a portion of the cost of raw materials, wages, fuel, etc. When payment for the contract is in sight these bank loans would have to be arranged for. Perhaps the bank would consent to take the bonds as collateral to a new loan, proceeds of which would go to retire a part of the bank advance; or the bank might advance on the bonds for the purpose of taking up liabilities contracted through purchasing machinery or making alterations. An alternative would be to sell the bonds to the bank, but in this case it would be necessary to have beforehand an agreement as to how much the bank would take. Whichever plan was followed there would seem to be a prospect of the bonds accumulating in the banks either as collateral to loans or as outright investments. So, unless the acquisitions are carefully regulated, the banking machinery might get clogged with a superfluity of this par-

ticular form of investment. It will no doubt require considerable ingenuity on the part of the bank executives to satisfactorily dispose of the securities. A certain proportion could be taken into their fixed investments and could be used in London as cover for exchange drawings. Prevailing circumstances make it rather difficult for the banks to sell any bonds they may take. There is, of course, a market in London, and sales could be made of small quantities from time to time; but motives of patriotism stand in the way of wholesale realizations of this nature. The financial burdens of the British Government are lightened if holders of the bonds keep them off the market.

Means of utilizing them in New York may be found, but our banks have not hitherto borrowed in New York, and to sell the bonds outright in that market in quantities would probably interfere with further borrowing in the United States by the British Government, should that be considered necessary or advisable. As the interests of the Empire thus require the banks to hold, until the war is decided, the greater part of the British bonds taken by them for investment or from their customers, it should be the aim of the manufacturers to take and dispose of as large a quantity of the war bonds as they conveniently can without passing them on to the banks. Of course where the bonds are pledged as collateral to loans which under different circumstances would be unsecured or covered by other security, Canada's financial position would be in no wise prejudiced or injured through passing the bonds into the banks.

Investment for Extra Profits.

There may be individual instances where a wealthy partner or stockholder of a manufacturing firm or company could take a part of his drawings or profit in the form of the exchequer bonds and hold them until after the war. It is assumed, necessarily, that these parties generally are keeping down their expenses and postponing unnecessary outlays so as to increase the surplus available for investment in this manner. Speaking generally, it can be said that surplus or extraordinary profits appear to be eminently suited for investment in the British bonds. When the profits of a manufacturing company are swollen far beyond the ordinary limits, the stockholders or owners naturally have some desire for increased dividends, cash bonuses, etc., but in times like these the Government and the people expect the executive officers of the prosperous concerns to exercise self-restraint in the matter of distributing excess profits.

One wishes that there might be practical means of directly distributing the British bonds instead of cash to the stockholders of prosperous manufacturing companies by way of bonus or dividend increase. The desired results could be obtained in a different way providing the stockholders concerned were willing to wait a short time for their extra distributions. For illustration, let us take the case of a company which is prepared to make a bonus or extra distribution of 2½, 5, or 10 per cent. on its stock. The company, of course, has its floating debt, if any, well in hand and can make the extra payment without borrowing directly at long date. Supposing that in lieu of at once sending out the dividend cheques, a circular were dispatched to stockholders, stating that the amount required to make the bonus had been debited to profit and loss account and carried temporarily to a reserve account, the funds being invested in British exchequer bonds, due in 1920, which had been taken by the company to facilitate further orders from the British Government and also with the object of supporting British finance during the war. Then, on conclusion of the war, the bonds could be realized and the cash distributed to the stockholders, arrangements being made whereby any of them wishing to take the bonds as invest-

ments could do so through transfers from the company's reserve supply.

In this way the stockholders or owners would not miss or lose their bonuses, the distribution would be merely deferred one, two or three years, as the case may be. They would have the satisfaction of knowing that the action of their executive tended to strengthen the hands of the British Government, and contributed to hasten the German defeat. At the same time a good example would be set for other corporations; and in the aggregate the action along this line might have considerable effect. It is not to be expected that such a policy would commend itself to the margin speculator, buying the stock in expectation of an immediate distribution, but the general body of permanent holders of the stock would nevertheless, in all probability, give their approval. It might be said that this policy would be applicable to manufacturing and other concerns not engaged in turning out munitions, but whose affairs have been made extraordinarily prosperous as a result of the war.

THE HUMAN EYE.

The eye is the most valuable organ in the body. Loss of one eye means considerable loss of working capacity, while a defect of one or both eyes not only interferes with accurate work, but by causing unconscious strain produces headache, stomach trouble and other sickness. Eye strain is caused by a good eye trying to work with a defective one. The strain is unconscious in many cases and a man does not know that his eyes are defective until he has them examined.

Continued strain gradually wears out the eyes.

A man who knows that his eyes are defective should consult an oculist and learn whether glasses are necessary.

If they are, he should get them and wear them as directed by the oculist. They will not only make his work more accurate but will save his eyes and improve his general health.

In working with grinding wheels, there is great danger of small chips of steel or bits of abrasive penetrating the eye.

These pieces, unless removed at once by a skilled oculist, will produce inflammation and ulceration which may go on to complete loss of vision.

If removed at once by an oculist they cause no harm.

Delay is dangerous and may result in a condition which even an oculist will be unable to cure.

The finest of instruments and strongest of light are necessary to remove these pieces of steel and abrasive without leaving a scar.

If a coarser instrument is used, beside the danger of causing inflammation, there is sure to be a scar which may interfere with the vision.

Therefore:—

Always wear goggles, which the company provides, when you are working near flying chips of steel or abrasives.

Never try to take anything out of a fellow workman's eye, unless authorized to do so by your foreman.

LOOKS QUEER, BY GEE!

Says Old Man Safety, says he to me,
It seems mighty queer, it does, by gee,
Fer to see a feller with his hand tied up,
His nose all squashed, and his ears in a muf,
It sure looks to me as if he ain't done his work very carefully.

—Youngstown Sheet and Tube Company.

DEVELOPING A WELFARE DEPARTMENT

Useful Suggestions Based on the Plan in Use by the U.S. Steel Corporation

By L. A. COOLIDGE

Chairman Welfare Department, National Civic Federation

(Reproduced from the "Manufacturers' News")

IN SUGGESTING a practical plan of organization for a corporation welfare department, it is assumed that the company has established a policy concerning the physical, social and mental well-being of the wage earners in its employ. The economic importance of this becomes apparent when it is recognized that a diminution in efficiency is brought about by lassitude and lack of definiteness in action, much of which may be prevented by providing for the convenience and physical comfort of the employees.

The determination to promote health and efficiency, however, is only the beginning of the battle. The president and other officers may earnestly desire to institute the best working and living conditions obtainable and yet be defeated in their purpose because the pressure of daily routine prevents any one of them from giving concentrated attention to the problem or because there is so employed no expert with a broad knowledge of the question or the causes of success and failure in efforts which have been made for the improvement of working conditions in other industrial concerns.

The greatest successes in welfare work have come in institutions where the man or woman in charge possessed the peculiar ability and personality necessary for effective supervision, whether there has been a formal organization or merely a concentration of responsibility, for the problems to be faced tax ingenuity. The first problem is to establish the personal contact between employer and employed which is often lost in big enterprises, and this in itself is frequently a task which calls for executive ability of a high order, tact sufficient to handle exceedingly delicate situations, and a broad knowledge both of labor conditions and the best methods for securing health, comfort and happiness.

But given the personality essential to the prosecution of welfare activities, the one in control will find that the organization of the department is of primary importance to success.

Administrative Board.

I have in mind an ideal system which has demonstrated its practical value in one large corporation with subsidiary companies or plants in different localities. It starts with a welfare board composed of the heads of the subsidiary companies. This administrative board has for its chairman a paid, experienced welfare manager who has no other duty than the supervision of the activities for the benefit of the employees,—a man formerly manager of one of the affiliated companies. In another corporation, which I have in mind, the director of the welfare work was formerly an employer, thus indicating that the type of man necessary for success is one "big enough for his job." This feature is worth dwelling upon because there has been a tendency sometimes to turn over welfare work to anyone who happened to come along, or to persons for whom positions could not be found. It has been regarded as work which anybody could handle. The fact is that one not well grounded in the intricacies of the industrial problem could readily make blunders which would lead to trouble with the employees and might even make them quit work, thus defeating one of the most important aims of the welfare programme, the contentment of the workers.

One great advantage of an administrative board lies in the fact that all plans for standardized arrangements are agreed upon after discussion by the officials of the corporation who are members of that board. To have in accord the chief executives is the first step toward achievement.

After the administrative board should come:

(a) The co-operation of heads of departments, superintendents and foremen; and

(b) The confidence of the employees and also their co-operation.

Plant Committees.

Unless there is due recognition of heads of departments, superintendents and foremen, who are inclined to be jealous of their prerogatives, they will resent the interference of the welfare managers, whose position will be regarded as a "good, fat job." They will set up the claim that they can take care of their own employees, and will block the efforts of the officials. For example, a superintendent may accept, because forced to do so, a newly installed system of ventilation, but he may intentionally fail to keep it in operation. He may put obstacles in the way of the successful conduct of the medical division by neglecting to give his support to the doctor or the visiting nurse.

To secure this necessary team work, it has been found effectual to organize what may be termed plant committees which, like the administrative board, will hold periodical meetings to consider problems related to the betterment of conditions. This second link in the chain of the organization, which is the safeguard against petty jealousy and which helps to create esprit de corps, will be the means through which helpful suggestions will be carried to the administrative board very likely through the welfare manager, whose zeal and energy will determine to a large degree the success of these plant committees.

Workmen's Committees.

While the confidence of the employees is easy to secure as compared with the co-operation of superintendents and foremen, it has nevertheless been found advantageous in the interest of harmonious action and the securing of contentment to organize workmen's committees which may have, under the direction of the welfare manager, supervision of recreation schemes such as athletic teams, club-houses or choral societies, and assist in various other phases of welfare work. These may be appointed from the rank and file by the superintendents or foremen and, as in one instance where great success has been achieved, they may be allowed sufficient time once or twice a month, in connection with the safety and sanitation work, to make inspections of the factory, mine or other work-place, receiving their regular wages for the time so occupied. The personnel may be changed so frequently during the course of the year that every man in a section will have served upon the committee. This removes the objection to the appointive character of the committee which might otherwise be regarded as too autocratic.

One great advantage resulting from the workmen's committees is the opportunity afforded to learn of grievances which without this outlet might smoulder and in time become

a fire of dangerous proportions, but which with it may be adjusted to the mutual advantage of the workmen and the corporation.

Summary.

Summing up then, the organization of a corporation welfare department would be:

- (1) An administrative board with a paid expert as director.
- (2) Plant or departmental committees composed of heads of divisions, superintendents and foremen; and
- (3) Workmen's committees.

Staff Welfare Workers.

This summary does not take into consideration the experts who may be needed as lieutenants to assist the welfare manager, such as specialists in sanitation, medicine, domestic science, technical and child training, recreation, home building and insurance. In a single corporation, there may be both factory and mining conditions, and there, for example, one specialist in ventilation may not be able to deal with that subject in both instances. To provide adequate ventilation in a factory or to remove through suction devices noxious gases or injurious dust requires one kind of expert, while the forcing of fresh air through a mine to the most remote recesses requires mechanism and skill of a different character.

The Welfare Director.

The welfare manager, in addition to being held responsible for the holding of meetings of the administrative board and committees, should be expected to make periodical trips of inspection to watch the progress of work already installed, to advise upon methods employed in starting new efforts and to learn of needs on the part of employees which may previously have escaped attention. This welfare manager must obtain advice from men in the various departments or plants who may be specialists in the branches involved in any phase of welfare work under consideration, and he must feel the pulse of the employees through his various subordinates or the workmen's committees.

The welfare manager will be expected not only to make reports and recommendations to the administrative board and transmit the results of meetings to the superintendents entrusted with the work of putting plans into effect, but later he must send out letters of inquiry to learn whether or not such recommendations have been acted upon—and if not, why not, and if so, the results.

Small Enterprises.

It may be objected that the organization above outlined would apply only to a great corporation, but such a highly developed board may be taken as a pattern for small industrial enterprises where the specialist in charge of the work is an architect, doctor, nurse, lunch-room manager, or head of the relief association who supervises all the activities which make for the well-being of the employees in their work-places or homes or in both.

In every corporation of appreciable size there is place for a welfare department organized and conducted on business lines and on an equal footing with every other department of the company. It prevents over-lapping of welfare efforts, and provides a system of incessant watchfulness which leads to the desirable "ounce of prevention."

CHANGES IN DIRECTORATES.

Joseph Wright, president of the Dominion Radiator Co., and the Bennett & Wright Co., and director of the Western Canada Flour Mills Co., has been elected vice-president of the Excelsior Life Insurance Co., in succession to the late Ruliff Glass.

Paul J. Myler, vice-president and general manager of the Canadian Westinghouse Co., Hamilton, has been elected a director of the Bank of Toronto. Since Mr. Myler came across the border from Pittsburgh to manage the Canadian Westinghouse Co., he has made big strides in the financial world.

Sherman Rogers, K.C., has been elected to the vacancy on the Board of the Nova Scotia Steel & Coal Co., occasioned by the resignation of Mr. Justice Harris. Mr. Rogers has also been elected a director of the Acadia Sugar Refineries.

Harry Cockshutt, president of the Cockshutt Plow Co., Brantford, has been elected to the directorate of the National Life Assurance Co.

R. Holden and W. D. Louson have resigned from the directorate of Ames-Holden-McCready, Limited, manufacturers of boots and shoes.

J. B. Kenny, Halifax, has been elected a member of the board of directors of the Acadia Sugar Refinery Co. D. R. Turner has been appointed secretary of the company.

John F. Ellis, president of Barber-Ellis, Co., Limited, and a former president of the Canadian Manufacturers Association, has been added to the board of the Crown Life Assurance Co. Mr. Ellis was prominent in former years on the directorate of the Manufacturers' Life Assurance Co., and was for some time its managing director.

OBITUARIES DURING JANUARY.

Robert Archer, a prominent business man in Montreal and a director of the Northern Electric Co., died on January 7, aged 79.

John G. Murchie, one of the prominent lumbermen of Eastern Maine and New Brunswick, died at his home in Calais, Me., on January 4, following a paralytic stroke. The late Mr. Murchie was about 78 years of age, and the head of the firm of James Murchie & Sons, owners of Phoenix Mills, Fredericton, N.B. He had carried on an extensive lumbering business in Maine and New Brunswick for a number of years past.

Richard Grigg, Canadian Commissioner of Commerce, died suddenly at Ottawa, on January 6. The deceased was born at Plymouth, England, in 1847, and came over to Canada at an early age, returning to England a few years later. After a successful business career in England, Mr. Grigg retired in 1905 to accept a commission from the British Government to investigate and report on economic conditions in Canada. He was appointed Trade Commissioner for Canada in 1909, with headquarters at Montreal, and in 1912 was appointed Commissioner of Commerce. His position had the rank of Deputy Minister under the Minister of Trade and Commerce.

Alexander Ramsay, president of A. Ramsay & Son Company, paint and oil manufacturers, Montreal, died suddenly at his home, 495 Argyle Avenue, Westmount, early Friday morning, January 14. Mr. Ramsay was born in Glasgow, Scotland, 76 years ago, was educated in Montreal, and began his business career in the paint and oil house established by his father. When his father died in 1867, Mr. Ramsay became sole proprietor, eventually incorporating the business under the title of A. Ramsay & Son Company. Under his direction the business was largely increased, and the house has long been one of the best known in its line in the Dominion. Mr. Ramsay was a member of the Montreal Board of Trade, the Royal Montreal and Beaconsfield Golf Clubs, the Heather and Caledonia Curling Clubs, and was past president of the Royal Caledonia Curling Club of Scotland. He was a justice of the peace, and has been a councillor of Westmount. He was highly respected for his integrity as a business man.

THE ELEVATED WATER TANK

Extracts from a Valuable Article in the "Travellers' Standard"

A GREAT deal of attention has been given to fire hazards in factories and large stores, and although there is still much to be done in this direction, the progress that has been made is distinctly encouraging. In the present article we shall deal with certain phases of the problem of supplying water for sprinkler systems and hose lines.

It is manifestly advantageous to have two separate supplies of water, so that if either one should fail at a critical time the other one would be immediately available. It is seldom practicable to have the original sources wholly distinct, because dependence must ultimately be placed, in most cases, upon the city or town mains; but to guard against the consequences of temporary interruption of this supply it is wise to store a considerable quantity of water in large tanks or cisterns, so that an abundant supply will be available even if the city mains fall at a critical time. Some cities, in fact, have ordinances requiring the maintenance of extra supplies of this kind. Another advantage of tank storage is, that the city mains are sometimes too small to furnish the flow of water that is required in times of great emergency, and it is then exceedingly important to have an auxiliary supply that can be drawn upon to supplement the direct flow from the ordinary system.

Distinct Problems.

It is common practice to provide one or more elevated tanks, large enough to furnish considerable quantities of water, and located at such a height that they afford sufficient "head" to deliver the water under suitable pressure, at any part of the building, by gravity alone. Tanks of this kind involve a number of distinct problems. In northern latitudes, for example, they are likely to freeze in the winter unless they are heated by coils of steam pipe or in some other way. In the present article, however, we shall concern ourselves merely with the danger to which employees are exposed through the possible downfall of such a tank.

These elevated tanks are of two main types—those erected upon separate towers apart from the plants, and those supported by or above the roofs of the buildings themselves. So far as first cost is concerned, it is often cheaper to place the tanks upon the buildings, because this saves erecting special towers. There is also an economy in ground area, which may be important in cities where land values are high. The saving in construction cost is not always so great as it might appear to be at first thought, however, because if a building is to support a heavy tank in addition to its own weight and the weight of the stock and machinery it is to house, the construction will have to be more substantial than it would need to be if no tank were to be supported. Moreover, a reasonable additional expenditure for providing independent supporting towers at a safe distance from the rest of the plant is a wise investment, because it greatly decreases the danger to which the employees and the property are exposed. Damocles, so the legend goes, sat at a royal banquet with a keen sword suspended above his head by a single horse-hair; and although the parallel between this case and the case of the water tank over the heads of hundreds of employees may not be very close, it is suggestive enough to bring home to the thoughtless the reality of the hazard.

The destruction of lives and property that may result if a tank should fall may be understood more clearly by the aid of a numerical illustration. Let us consider, for example, the case of a tank having a capacity of 45,000 gallons, and located at a height of twenty feet above the roof of a factory build-

ing. It is a matter of simple calculation to show that if such a tank should fall while full of water, it would strike the roof with an impact (or a kinetic energy) equal to that of a sixty-ton locomotive going at the rate of forty-three miles an hour. It is easy to imagine the havoc and destruction that would follow.

Whatever method of support is used, it certainly pays to buy good tanks from responsible manufacturers who design them carefully, inspect them during construction, employ skilled workmen, and use good stock. This last item is of special importance, and many tank failures have been traced to the use of defective wooden staves. These staves should be made of cypress, white pine, white cedar, redwood or Washington or Douglas fir, and they should be free from sap knots, shakes, fungus growth, worm holes and other defects.

Inspection Necessary.

After a tank has been installed it should be inspected frequently and carefully, and special attention should be paid to the beams, walls and other structural parts that support it.

The main causes for the failures of wooden tanks while in service are defective materials, poor design and poor workmanship during construction, weak building walls and supports, and the corrosion of the hoops or bands around the tanks. A very large proportion of tank failures—in fact, half the entire number—have been caused by the unexpected bursting of flat hoops, on account of corrosion. Moisture finds its way in between the hoops and the staves, and causes the metal to corrode on its inner surface, where the inspector cannot see it. In making an inspection the hoops should be smartly struck by a pointed hammer every few inches, to be sure that no thin places are missed. Round hoops are better than flat ones, not only because they can be examined more easily and effectively, but because they do not hold moisture in the same way, but also because for a given cross-section of metal the round hoops have far less surface, and are therefore less liable to rapid corrosion.

The hoops should be made either of wrought iron or of mild steel of good quality, wrought iron being usually preferred because it is believed to offer more resistance to rust. There should be no welds in the hoops, and the practice of welding bolt-ends to them should be particularly condemned. Flat hoops are riveted together at the ends, and round ones should be united by suitable lugs, which should be made of malleable iron or mild steel, and not of cast iron. If the hoops are upset at one or both ends, the upsetting should be done by a skilled man, who will be careful not to overheat the metal.

Pointers About Hoops.

The hoops, whether flat or round, should not be more than 21 inches apart, and they should be put on in such a way that the riveted ends or lugs "break joints" with one another, instead of coming opposite one another. Extra hoops should be provided near the bottom of the tank, not only because the internal pressure is greatest in this region, but also because the swelling of the bottom planks of the tank may strain the lower hoops severely unless provision is made for taking care of this extra load. When hoops are to be removed from a tank, either for renewal or for any other reason, be sure that everything is safe before any hoop is cut or loosened, and renew the hoops one at a time, so that there will be no needless danger of failure. It is far better to empty the tank before doing work of this kind upon it, if

there is sufficient water storage elsewhere to suffice in case of the outbreak of a fire while the tank is being repaired; but the water should not be drawn off without good reason, and extra watchmen should be posted while the tank is out of service, so that fires may be detected at the earliest possible moment.

Frequent painting of the hoops will help greatly in preserving them and preventing corrosion. This is particularly true of round hoops, because they can be reached at almost every point, whereas a flat hoop cannot be painted on the inner surface without removing it from the tank.

Water leaking through the stave joints and dripping down on the supporting beams weakens them by rotting or warping, if they are made of wood. Steam rising up around the beams also has a like tendency. All such beams should therefore be inspected frequently, and we strongly advise that wooden beams be replaced by I-beams of steel.

Many tanks have failed on account of the weakness of the building walls by which they were supported. Sprinkler tanks are often erected after the building is finished, with their weight resting upon walls that were not designed to carry such a load. If a tank is to be installed upon a building that was erected without reference to this extra weight, a thorough inspection should be made, and the load on the walls should be calculated with care in order to avoid all uncertainty as to the adequacy of the support. In the case of a tank already erected, a critical inspection should also be made of the walls to see that they are still in a safe condition. If there is any doubt about it, the necessary additional strength may often be had by bricking up window and door openings, or by the use of auxiliary steel beams; but if beams are used it is important to see that foundations of adequate strength are provided for them. In all new work the architects and tank builders should keep in close touch, and full provisions should be made for the stresses due to the tank and its contents.

OF PERSONAL INTEREST.

W. W. Gray, Straftord, has been appointed manager of the Brockville branch of the Whyte Packing Co. Mr. Gray has been in the cheese business for thirty-five years.

Frank E. Watkins, formerly associated with the Canadian Fairbanks-Morse Co., Toronto, has been appointed works manager of the East Jersey Pipe Corporation, Paterson, N.J.

F. W. Sumner, of Moncton, N.B., who is largely interested in several of the local industries, has been elected president of the St. John and Quebec Railway Co., in succession to Irving R. Todd, of St. Stephen, recently resigned.

Mr. F. B. McFarren, until recently general manager of the Interprovincial Brick Company of Canada, Limited, has received an appointment as lieutenant with the 83rd Battalion, C. E. F. Mr. E. G. Glen has been appointed acting manager during his absence.

B. H. Brown, president of College Press, Limited, Toronto, who is filling the duties of senior major of the 127th "York Rangers" Overseas Battalion, has handed over the management of the College Press to John Bailey Mill. Major Brown announces that until peace is declared he intends to devote himself entirely to his duties in the service of King and Empire.

It is announced from Kingston that A. W. Wheatley, vice-president and general manager of the Canadian Locomotive Co., will leave about the first of April to assume the presidency of the Lima Locomotive Co. at Lima, Ohio. Mr. Wheatley has been with the Canadian Locomotive Co. since the reorganization, and much of the success of the industry has been due to his administrative ability.

A. Grant Macdonald, formerly assistant superintendent of construction with the Schulz Brothers Co., Limited, Brantford, Ont., has been transferred from the 125th Battalion, in which he held rank as sergeant, to the Canadian Aviation Corps, with the rank of Flight Lieutenant. His departure was made the occasion of the presentation by his firm of a handsome portmanteau.

UNION BANK OF CANADA MAINTAINS GOOD PROFITS AND STRONG BALANCE SHEET.

The annual report of the Union Bank of Canada, as at November 30, 1915, reveals a continuance of the very satisfactory state of affairs which has prevailed with this Bank throughout the trying years of financial stringency, reaction and war-time conditions. It has again been able to earn, in a year which has been exceptionally unprofitable for most banks, sufficient profits to pay its full regular dividends and bonus, to make complete and extensive provision for depreciation and other contingencies, to maintain its contribution to the Officers' Pension Fund, and to meet the new and serious burden of the war tax (amounting to \$45,730), and all this not only without drawing on accumulated profits or Rest Account, but while making a slight addition to the balance carried forward each year.

This excellent showing was achieved in spite of a very strong liquid condition of the assets of the Bank, no less than 47.92 per cent. of its liabilities to the public being represented by cash and promptly realizable assets. The increase in this class of assets, however, was secured not by cutting down the supply of credit to commercial clients (for commercial loans were but little less than in 1914, notwithstanding the great reduction on trade activity, and were actually greater by over two million dollars than they were in 1913), but as a result of a great increase in the funds deposited with the bank by the public. Interest-bearing deposits were increased during the year by five million dollars, and non-interest-bearing deposits by four and a half millions.

The total assets of the Bank are now 90½ millions as compared with about 81½ millions in 1914,—liquid assets which are now \$39,138,385 as against \$26,709,540 a year ago. This increase is evenly distributed over all the best items of the liquid class,—actual cash in specie and Dominion notes, bank balances in Canada and abroad, and call loans abroad. The Union Bank is therefore in a particularly good position to meet the requirements of expanded commercial activity as soon as they arise, and the President, Mr. John Galt, and the General Manager, Mr. Balfour, must be congratulated upon the very strong showing which they have been able to make.

Profits for the year were \$659,688, comparing with \$712,440 in 1914, and \$750,095 in 1913. They amounted to 13.19 per cent. on the capital stock; dividends and bonus accounted for 9 per cent., 3 per cent. was appropriated for contingencies, and the rest was required for War Tax and Pension Fund. The balance carried forward was increased from \$103,019 to \$106,976. The Union Bank, which was originally a Quebec City institution of old standing and fine record, and recently removed to Winnipeg to be more closely in touch with Western developments, appears to combine the caution and the conservatism of the East and the enterprise of the West in singularly happy degree.

T A R I F F

By J. R. K. BRISTOL

EMBARGO.

War Measures Embargo:—Additions to Prohibited Exports.

His Royal Highness the Governor-General in Council under and in virtue of the provisions of sections 242 and 291 of The Customs Act, is pleased to order and it is hereby ordered as follows:

The exportation of the following goods is hereby prohibited to all destinations abroad other than the United Kingdom, British Possessions and Protectorates, viz.:

- Cod oil and other fish oils;
 - Mother liquor containing potash, the product of sugar beets;
 - Rags of cotton and rags of cotton and wool mixed.
- Effective after the 22nd day of January, 1916.

CUSTOMS RULINGS.

Pulp Colors—Made into a paste with size or water, item 711, general tariff rate 17½ per cent., plus the war tariff of 7½ per cent.

Ball Bearings—Declared dutiable under item 453, general tariff rate 27½ per cent., plus the war tariff of 7½ per cent.

Dumping Duty.

Differential Pulley Blocks—Ruled to be exempt from dump as being a class of articles not made in Canada.

Boot Hooks (metal)—Ruled to belong to a class of goods made in Canada and to be subject to the operations of the dumping clause.

AUSTRALIAN COMMONWEALTH INCOME TAX ON OVER-SEA FIRMS.

The Income Tax Law recently enacted in Australia is considered by the Australian authorities to have the effect of imposing a tax on 5 per cent. of the value of certain imported articles if sold through agencies or travellers representing foreign manufacturers. Mr. D. H. Ross, the Canadian Trade Commissioner, Melbourne, Australia, reports on this tax as follows, vide Department of Trade and Commerce Weekly Bulletin, No. 625, of January 17th, 1916, viz.:—

Commonwealth Income Tax on Oversea Firms.

"Under the Income Tax Assessment Act as amended, the position of an agent selling goods for a foreign principal is stated to be as follows:—

"Goods are deemed to be sold in Australia if there is an Australian representative who receives commission or salary for obtaining orders, or for influencing the sale of the goods. The absentee principal is taxable on an income equivalent to 5 per cent. of the price at which the goods are sold. The agent is taxed on the amount of his commission or salary. The agent is required to make returns on his own behalf as well as on behalf of his principal, and he is required also to pay not only his own tax, but the tax assessed against the principal, out of any of his principal's money coming into his hands. For the first year of tax only the agent is re-

lieved of personal liability in respect of the tax of his principal, but this does not relieve the principal. Before the agent is relieved he must satisfy the commissioner that he has none of his principal's money and will receive none out of which the tax can be paid, and also that the principal has refused to pay the tax.

"It is pointed out by the representatives of British manufacturers that their principals have already to pay a high income tax in the United Kingdom, and that a British manufacturer not represented in Australia would escape the local tax, while those who were represented by agents or travellers were made liable.

"The obvious difficulty in collecting the income tax from the Australian representatives of firms in the United Kingdom and other British possessions, is recognized by the Department, which has relieved the agent from the responsibility of payment for the first year only, while maintaining the liability of the oversea principal."

MOTOR VEHICLES EXEMPT FROM CUSTOMS DUTY IN PARAGUAY.

New automobiles and motor trucks, including accessories and spare parts are exempt from customs duty on importation into Paraguay. The law which exempts these articles from duty will lapse early in November, 1917, unless in the meantime an Act is passed to extend the period of exemption. The Customs duties waived by this new law amount altogether to 62 per cent. ad valorem.

In connection with the foregoing the fact may bear repetition that Canadian manufacturers are allowed practically duty free materials and articles for manufacturing for export. The arrangement is carried out by granting a drawback of 99 per cent. of all Customs duties paid on imported materials or articles which are incorporated into Canadian manufacture and exported.

GERMANY.

Proposed Measures for Protection of German Market.

The Association of Saxon Manufacturers (Verband Sächsischer Industrieller) adopted the following resolution on October 7th, 1915:—

"In view of the danger of a scarcity of raw materials, semi-manufactured, and manufactures that may be caused by the change in the economic life of Germany from war conditions to those of peace, and the possibility that a sudden resumption of commercial relations with the present hostile countries upon the conclusion of the war will result in the flooding of the German market with foreign products, the Association of Saxon Manufacturers considers it necessary that the Bundesrat (Federal Council) adopt proper measures to guard against such displacement of German industry from the German market, and believes that this could be accomplished most expeditiously by a temporary restriction of foreign imports of semi-manufactures and manufactures to a fixed portion of such imports prior to the war."

TARIFF CHANGES IN SPAIN.

By a tariff change effective from January 1st, 1916, the following products are admitted into Spain without payment of Customs duty, viz.: Wheat and wheat flour, rice, lentils, chick peas, beans, potatoes, cattle, horses, mules, hogs, donkeys, sheep, goats, fresh meats, poultry (live or dead), eggs, corn when not for distillation, oats, barley, ham, bacon, salt pork, charcoal and cast iron and steel in pigs and bars.

SALVADOR.

The Government of Salvador has reduced the export duty on hides to a straight \$7.00 per 100 kilos gross weight.

PROPOSED TARIFF REVISION IN PORTUGAL.

(Extract from Commerce Report, Washington, Jan. 15th, 1916.)

"As previously reported by the Consul-General at Lisbon (see Commerce Reports for December 28th, 1915), a commission has been appointed by the Portuguese Government to revise the tariff law of Portugal, and it is expected that a report will be submitted within two or three months for the approval of Parliament. Many of the classifications of the present customs tariff are considered to be too general, and a radical revision of the entire law is planned by the commission. The Chairman of the Commission, Senhor Carlos Gomes states that suggestions from United States Chambers of Commerce will be welcomed."

ALUMINUM IN NORWAY.

According to the Dutch Legation in Stockholm, an extensive aluminum smelter is being organized at Høyanger, Norway, where there is a waterfall which may furnish 60,000 horse-power. It is proposed to develop 20,000 horse-power at once, to provide for the production of 4,000 tons of aluminum per year. The capital stock of the company is fixed at \$3,350,000, of which \$2,680,000 is subscribed. The banks of Christiania and Bergen have declared a willingness to underwrite a loan of \$1,000,000 for the company.

A number of bauxite beds have been secured in southern France, where the ore will be worked into oxides and shipped in this concentrated form to Norway for the final conversion into metal by electrical furnaces. (Commerce Report, Washington, D.C., January 15th, 1916.)

DEMAND FOR PRINT PAPER IN NEW ZEALAND.**Example of Benefits of Preferential Tariffs.**

"There has been a serious shortage of print paper in New Zealand owing to the increased demand on account of the increased circulation of newspapers, and the demand is on the increase. The imports for the first ten months of 1915 were valued at \$902,765 against \$872,860 for the same period in 1914.

"Previous to 1914 Great Britain supplied more than any other country, with Canada next, but now Canada is well in the lead. The urgency became so great that the newspaper interests in this country chartered a steamer and sent it to British Columbia for a 3,000-ton cargo of print paper. Print paper is dutiable at 21 per cent. ad valorem under the general tariff, with a reduction of 20 per cent., making the duty only 1 per cent. ad valorem, if imported from the British Dominions; but even at this American interests might get some business here since it is a question whether Canada will be able to meet the demands.

"Print paper is quoted here now at 4 to 5 cents per pound wholesale."—(Commerce Reports, Washington, D.C., January 15th, 1916.)

CONTINUANCE OF BRAZILIAN TARIFF PREFERENCE TO UNITED STATES PRODUCTS.

During the year 1916 the products and manufactures of the United States will continue to receive in Brazil the preferential treatment which has heretofore been granted, in accordance with an executive decree dated January 14th, 1916.

(The reductions in duty referred to are those made in accordance with a provision contained in the Brazilian budget law, which authorizes reductions on certain articles imported from countries making tariff concessions in favor of characteristic Brazilian products. Under previous decrees, wheat flour imported from the United States has been allowed a reduction of 30 per cent. of the duty, and the following articles of United States origin a reduction of 20 per cent. of the duties prescribed by the Brazilian customs tariff: Condensed milk, certain manufactures of rubber, clocks and watches, paints and inks (not including writing fluids), varnishes, typewriters, scales, refrigerators, pianos, windmills, cement, dried fruits, furniture for schools, corsets and desks.) (Commerce Report, Washington, D.C., January 19th, 1916.)

COMMERCIAL ABBREVIATIONS IN ITALY.

(Extract from Commerce Report, Washington, Jan. 8th, 1916.)

There have come to the attention of this Consulate several cases of misunderstanding between American exporters and Italian importers in which the use of commercial abbreviations has led to serious complications. There are certain generally used abbreviations known all over the world in commercial transactions which seem to be capable of different interpretations, to judge from a recent controversy between an importer in this city and an American exporter. In telegraphic communications such abbreviations are widely used, and it is therefore of the greatest importance that their significance should be understood. While the following list, showing what is meant by common abbreviations in Italy, may appear elementary, the need of explanation of these terms has been shown in actual transactions:—

F.o.b.—free on board—is invariably understood to mean free on board ship at seaport. In Italy it is never understood to mean free on board cars. For instance, f.o.b. New York means that freight from the inland place of manufacture or shipment, insurance (if any) during the railroad transit in the United States, cartage from depot to dock, and loading charges at dock are all paid by the exporter.

F.a.s.—free alongside (ship)—means that railroad freight and insurance in the United States and all cartage charges to the dock are paid by exporter. The loading charges from dock to ship in this case are paid by the purchaser.

F.o.r.—free on rail—means loaded on railroad cars at the point quoted, e.g., by f.o.r. Cincinnati or f.o.r. New York it is understood that the purchaser buys the goods on the railroad cars at Cincinnati or New York free of all charges.

C.i.f.—cost (of goods), insurance, freight. By this term it is understood that the exporter sells the goods with all charges paid to the point quoted. For example, a quotation of coal at \$12.50 per ton c.i.f. Naples would mean that the coal is sold by the exporter at that price on shipboard at Naples, the exporter having paid all charges, including ocean freight and insurance. The Italian buyer would have to pay the cost of unloading from ship, customs duties and handling charges in Italy.

BRAZIL.**Labelling of Merchandise.**

There is no law requiring the labelling of imported articles in Brazil, but goods of foreign production cannot be so labelled as to suggest Brazilian origin, nor may domestic articles bear marks indicating foreign manufacture. The importation of labels printed in a foreign language, separately from the merchandise for which they are intended, is prohibited, labels so imported being liable to confiscation at the Custom House, and in addition a fine of 1,000 milreis (milreis, according to recent quotations, about \$0.25) may be imposed. Where labels in a foreign language or in Portuguese are imported together with merchandise, the name and address of the manufacturer must be indicated thereon. Labels printed in Portuguese may, however, be imported separately, if for use in connection with articles of Brazilian production, provided they state the name and address of the Brazilian manufacturer of the products.

It is provided by the Federal Sanitary Laws of Brazil that all pharmaceutical preparations sold under a special trade name shall indicate on their labels the particular pharmacopœia in which the formula appears, and before such labels may be used the vendor of the preparation must submit to the Brazilian Board of Health for its approval a sample thereof. (Commerce Reports, Washington, January 15th, 1916.)

COSTA RICA.**Charges on Parcel Post Packages.**

Owing to the cost of clearing parcels through the Customs House of Port Limon, books, etc., and articles of no commercial value, such as samples, should be sent by third or fourth class mail rather than by parcel post. The minimum fee for clearing parcels, irrespective of value, is 0.75 colon (colon, par value, \$0.465), which is additional to the import duty and supplementary Custom House charges. Thus, on a sample coffee bag, value \$0.28, the fee for clearance when shipped by parcel post is about \$0.35, to which is to be added the postage as well as the import duty. It is stated furthermore that articles sent by parcel post are commonly delivered two days later than those sent by regular mail. (It is supposed that the above charge on parcel post packages is levied at all Costa Rica Custom Houses.) (Commerce Reports, Washington, D.C., January 15th, 1916.)

GUATEMALA.**Supplementary Charges on Imports.**

The charges levied on imported goods, other than Customs duty, in Guatemala are negligible in comparison with the supplementary fees imposed in certain other countries of Latin America. Thus, on products entering the country through the ports of San José, Livingstone and Puerto Barrios, a tax of 0.30 peso per quintal (quintal equals 101.4 pounds) is levied, and on all articles not subject to import duty the charge is 0.10 peso per quintal. A fee of 0.125 peso is imposed on each package imported or exported through the ports on the Atlantic coast and through the port of Ocos. Products passing through the Custom House of Champerico are subject to a tax of 0.04 peso per quintal, salt being liable to a fee of 0.50 peso per quintal. Imported flour is subject to a surtax of 0.50 peso per quintal, except that imported through San José, where the tax is 0.03 peso per package. Common salt entering through this port is subject to a fee of 0.03 peso per quintal. A tax of \$10 United States gold is levied on guns and

rifles, and a tax of \$8 on revolvers, upon importation by way of Izabal, Livingston, Puerto Barrios, Estrada Cabrera, Panzos, San José, Champerico and Ocos.

No fixed fees for the handling of imported merchandise are in force in Guatemala, such charges varying in different localities. If goods not claimed remain in Government warehouses more than thirty days a fine of 0.08 peso per 100 kilos, payable half in United States gold and half in Guatemalan paper currency, is imposed for each day the merchandise remains in storage.

(The Guatemalan paper peso, in which the above charges are payable (except where otherwise specified) is at present worth about \$0.0204, according to the report of the Vice-Consul at Guatemala City.) (Commerce Reports, Washington, D.C., January 5th, 1916.)

PANAMA.**Stamp Taxes on Customs Documents.**

(From Commerce Reports, Washington January 5th, 1916.)

No charges on imported goods, other than Customs duties, are levied in Panama, with the exception of the stamp taxes imposed on the original Consular invoice and the original bill of lading, which must be presented at the Custom House by the importer before clearance is allowed. The value of stamps required on the former ranges from \$0.20, in the case of shipments valued at not more than \$150, to \$12.50 for consignments of value exceeding \$2,500, while bills of lading must bear stamps to the value of \$0.20. These charges are entirely separate from the fees payable for the Consular certification of invoices and bills of lading for shipment to Panama. (See Tariff Series No. 24.)

STRAITS SETTLEMENTS.**Transshipment at Singapore.**

(From Commerce Reports, Washington January 5th, 1916.)

"A copy of the Straits Settlements Government *Gazette* "Extraordinary for October 1st, 1915, transmitted by Consul-General John P. Bray, Singapore, contains a proclamation "which states as follows: 'Facilities will not be given for "the transshipment of goods which have been shipped in "neutral vessels by or to any person or any body of persons "of enemy nationality resident or carrying on business in such "countries (i.e., China, Siam, Persia and Morocco) or their "intermediaries.'

"This provision is to be considered in connection with "the list of authorized importers in China and Siam promulgated under the British decree of September 24th, 1915, "which was published in a supplement to the London *Gazette* "of November 5th, and contains the names of importers in "these two countries to whom articles exported from Great "Britain and British colonies may be consigned. The transshipment of goods exported from the United States and other "countries, if consigned to a firm not included in the list, "would, therefore, not be permitted under the terms of the "proclamation, and a similar prohibition of transshipment "would probably apply at other British colonial ports. In view "of the fact that merchandise destined for Siam is commonly "sent by way of Singapore or Hong Kong, and that destined "for other Chinese ports by way of Hong Kong, the importance "of the provision is apparent."

NOTE.—A copy of the list of authorized importers in China and Siam, together with recent additions thereto, is on file in the Tariff Department of the Canadian Manufacturers Association, and will be loaned to members upon application.

MARKET FOR LEATHER GOODS IN SOUTH AFRICA.

(Written by U. S. Consul, E. A. Wakefield, Port Elizabeth.)

South Africa is a country of great distances, and travel between the Port Elizabeth district and Europe under ordinary circumstances is considerable, hence there is a large market for all kinds of sample cases, suit cases, bags, leather portfolios and leather trunks. There are two angling clubs here, and American fishing-tackle cases and bags should find a ready market. The attempt to introduce fireless cookers in this district has failed, although it is a practical certainty that they will be used at some future time, after their efficiency has been amply demonstrated.

twice the price for goods that were of a certainty "made in America." The term "American fashion" is common in the trade. The "American fashions," however, are not fashioned in America, although the styles have been carefully copied from there.

American nickel and gold-filled frames should find a good sale here. There would probably be no market for gold frames. The quality and style of the lenses themselves are considered superior. Binoculars and field glasses are particularly needed here now. These glasses are of great use to fishermen and other seafaring folk. The American article is considered expensive, but of good quality.

NORWAY A POSSIBLE MARKET FOR OPTICAL GOODS.

(Commerce Report, Washington, January 17th, 1916.)

There is an opportunity for the introduction of the cheaper grades of American optical supplies in Stavanger. A leading optician states that if once American goods were sold here in a couple of years there would be a general use for them throughout Norway, where now there is practically none. The regular source of supply has been rendered uncertain by the war.

The main difficulty in the way is the question of terms. Buyers here are accustomed to three months' credit, and it is hard for them to think of any other system. Prices formerly quoted from America have seemed satisfactory, but the cash terms were not. American styles are considered highly desirable, much more attractive than those in general use here, and the belief has been expressed that people would gladly pay

FRANCE.**Patent and Box Calf, etc., Leather.**

H.M. Consul at Bordeaux (Mr. A. L. S. Rowley) reports that in his Consular district, and probably throughout France, there is a great lack of the higher class of leather for boots and shoes, especially patent and box calf leather. If British manufacturers were to send out commercial travellers to call upon boot and shoemakers, H.M. Consul suggests that they would probably do a very considerable amount of business, which, if terms of payment were good, would in all likelihood become permanent. Travellers should have a good knowledge of the French language and should be able to quote prices in French currency.

The classes of leather referred to appear to have been supplied, prior to the war, by German manufacturers at Frankfort-on-Main, whose travellers secured a very large trade. (Board of Trade *Journal*, January 6th, 1916.)

FOREIGN TRADE OF CANADA.

(Comparison, 1913, 1914, 1915.)

IMPORTATIONS.**Month of December.**

	1913	1914	1915	1913	1914	1915
Dutiable Goods	\$28,798,409	\$17,482,008	\$24,805,899	\$323,434,077	\$215,825,567	\$197,950,486
Free goods	16,206,143	12,910,905	20,884,822	162,317,408	132,921,353	145,972,837
Coin and bullion	7,567,279	1,061,970	9,429,288	12,989,827	130,619,107	19,902,003
Duty collected	7,845,300	4,953,048	9,242,125	83,954,061	58,581,066	71,305,304

Nine Months Ending December.

	1913		1914		1915	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Products of Mine	\$4,778,334	\$9,766	\$3,791,299	\$90,540	\$5,632,984	\$207,652
Products of Fisheries	2,524,487	8,252	2,136,581	11,616	2,067,132	8,429
Products of Forest	2,782,061	37,836	2,698,804	400	3,553,083	2,764
Animals and their products	4,744,056	78,464	8,301,667	364,036	9,430,534	330,383
Agriculture	35,367,943	308,007	12,289,411	557,046	49,389,763	36,303
Manufactures	5,599,086	583,366	7,761,702	522,723	21,810,697	673,545
Miscellaneous	7,676	130,260	214,145	108,127	287,209	164,125

EXPORTATIONS.**Month of December.**

	1913		1914		1915	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Products of Mine	\$4,778,334	\$9,766	\$3,791,299	\$90,540	\$5,632,984	\$207,652
Products of Fisheries	2,524,487	8,252	2,136,581	11,616	2,067,132	8,429
Products of Forest	2,782,061	37,836	2,698,804	400	3,553,083	2,764
Animals and their products	4,744,056	78,464	8,301,667	364,036	9,430,534	330,383
Agriculture	35,367,943	308,007	12,289,411	557,046	49,389,763	36,303
Manufactures	5,599,086	583,366	7,761,702	522,723	21,810,697	673,545
Miscellaneous	7,676	130,260	214,145	108,127	287,209	164,125
Coin and bullion	\$55,803,642	\$1,155,951	\$37,193,609	\$1,654,488	\$98,171,402	\$1,423,201
	34	292,998	15	79,908	20	101,322
Total	\$55,803,676	\$1,448,449	\$37,193,624	\$1,734,396	\$92,171,422	\$1,524,523

Nine Months Ending December.

	1913		1914		1915	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Products of the Mine	\$44,218,506	\$177,923	\$38,960,584	\$276,574	\$49,034,177	\$7,265,059
Products of the Fisheries	16,080,950	59,954	14,117,351	104,393	16,103,698	85,945
Products of the Forest	35,976,857	591,045	35,056,103	476,990	42,184,929	384,089
Animals and their products	43,568,859	1,069,752	58,436,712	2,330,424	78,559,429	2,193,963
Agriculture	177,706,169	8,495,487	106,608,923	34,840,516	202,506,916	17,111,054
Manufactures	41,478,454	8,476,597	53,186,926	5,613,002	119,399,269	5,752,596
Miscellaneous	85,829	2,599,270	456,440	2,999,002	3,745,610	1,183,089
Coin and bullion	\$359,115,624	\$21,470,028	\$306,823,039	\$46,640,901	\$511,534,048	\$33,975,795
	34	8,121,689	445	4,179,347	115	103,151,019
Total exports	\$359,115,658	\$29,591,717	\$306,823,484	\$50,820,248	\$511,534,163	\$137,126,814

I N S U R A N C E

LUMBERMEN TO OPPOSE FIRE PREVENTION.

THE National Lumber Manufacturers' Association announces that it has completed the subscription of \$50,000 for each of the following five years for the proposed trade extension programme. In addition to pushing the sale of lumber, an important feature of the campaign will be the antagonism of building codes and shingle roof ordinances and any other fire prevention activities which interfere with the use of lumber.—*The Bulletin*.

WALL BOARD MUST BE TESTED.

City Architect Pearse, of Toronto, has ruled that no wall board will be allowed as a substitute for lath and plaster until it is tested, and that the test must show that from a fire resistance standpoint it is equal to lath and plaster. Some builders, it is claimed, have been trying to slip in wall board, which is very inferior. This wall board has not been permitted since the Woodbine Hotel fire, where it was discovered in the walls. It is likely that prosecutions will follow neglect to heed the ruling of the City Architect.

ONTARIO FIRE MARSHAL APPOINTED.

The Ontario Fire Marshal Act, which was passed over twelve months ago, has finally resulted in the appointment of a Fire Marshal in the person of Mr. E. P. Heaton. The Act provided for an official with power to investigate the causes of all fires in Ontario, assemble records and study methods of fire prevention. Briefly, the duties of the Fire Marshal will consist in taking whatever action he finds necessary or desirable to reduce the heavy annual fire waste in Ontario. He will possess a good deal of power and the results of the appointment will be looked forward to with considerable interest.

PROPOSED LIFE INSURANCE MERGER.

Announcement has been made of the proposed amalgamation of the Sun Life and Manufacturers Life Insurance Companies. Under the terms of the agreement the Sun Life will assume all policy and other contractual obligations of the Manufacturers Life as at the 1st of January, 1916, and will accept transfer of its assets with the exception of capital stock. Before being finally carried into effect, the merger must be considered and approved by the Treasury Board and the hearing will probably not take place until the middle of February. If the amalgamation is approved, the Sun Life will send to each Manufacturers Life policyholder a certificate of guarantee undertaking to assume all liability under his policy.

REGULATION OF FIRE INSURANCE RATES SPREADING.

The uniform plan recommended by the National Convention of Insurance Commissioners, in December, 1914, for the regulation of fire insurance rates, was during 1915 enacted into law in Iowa, Minnesota, Missouri and Oklahoma, and in part in Michigan and Pennsylvania. Rating laws were already in force in Kansas and Texas, and the subject is now being

investigated in Kentucky for action at this year's session of the legislature. Bills are also pending in Wisconsin and Illinois. North Carolina has enacted a law combining the laws in force in New York and Massachusetts.

The National Board of Fire Underwriters has put up a strong fight against the enactment of such legislation, the opposition being centred against Section 6 of the convention bill, which gives the insurance commissioner power to fix and order the substitution of a bureau rate for one which in his opinion is discriminatory or unjust.—*Bulletin*.

FIRE LOSSES DURING 1915.

According to estimates compiled by the *Monetary Times*, the fire loss throughout Canada for the month of December amounted to \$1,595,255 as compared with \$1,087,980 for November and \$1,661,822 for December, 1914. This brings the total fire losses of the Dominion for last year up to \$13,670,527, a very striking reduction when compared with the six previous years. The losses sustained during the years 1909 to 1914 were as follows:—

1909	\$18,905,538
1910	23,593,315
1911	21,459,575
1912	22,900,712
1913	26,346,618
1914	24,321,012

The average monthly loss was reduced from \$2,026,751, in 1914, to \$1,139,210, and the average per capita loss from \$3.15, in 1914, to \$1.78. Of the Dominion's fire waste, Ontario was responsible for \$5,143,680, or nearly thirty-eight per cent., Quebec following with a share amounting to \$3,341,676.

The United States also experienced an unusually favorable year from the point of view of fire losses. The total loss for the United States and Canada combined during 1915 amounted to \$182,836,200, a decrease of nearly \$53,000,000 as compared with 1914.

INTERESTING WORKMEN'S COMPENSATION DECISION.

The Wisconsin Industrial Commission recently awarded compensation, under the Wisconsin Workmen's Compensation Law, to the foreman of a sewer construction job, for injuries resulting from assault by a fellow workman. Edmund Ryan, the applicant, was employed as foreman on a sewer construction job in Milwaukee. Frank Mowak, who committed the assault, was a laborer under Ryan's supervision. Because of criticism from Ryan for inattention to duty, Mowak quit work. Mowak approached Ryan in a threatening manner, with his shovel in his hand, and demanded his pay. Ryan told him not to bother him and, as Mowak placed himself directly in front of him and demanded his time, Ryan pushed him away. Mowak then struck him in the face with his fist. As Ryan fell to his knee, he grabbed at Mowak and Mowak struck him over the head with his shovel. Ryan's skull was fractured, his right side paralyzed, and he has been seriously disabled since.

The Commission's opinion is as follows: The employer is liable for compensation for personal injuries accidentally sustained by his employee while performing service growing

out of and incidental to his employment. As foreman of the construction crew, Ryan's duties required him to supervise the work, maintain order, discharge unruly workmen and take such action as was necessary to carry out the work successfully. He was performing services growing out of and incidental to his employment when assaulted by Mowak. It is not unusual for a workman to become angry when reprimanded by his superior. The employer selects his foreman in anticipation of the fact that he may be called upon to deal with all classes of workmen and frequently with those of quarrelsome dispositions. Ryan was assaulted while dealing with such a man and, in his position as foreman, the assault must be considered one of the hazards of his employment.

The Commission entered a temporary award pending Ryan's recovery. The insurance company concerned will probably appeal to the courts.

A B. C. COMPENSATION CASE.

Sitting as an arbitrator under the Workmen's Compensation Act, His Honor Judge Schultz, in Vancouver, has ordered the Western Fuel Co to pay the sum of \$1,500 as compensation to the relatives of the late James McIntosh, a miner, who was killed in an explosion in the Protection Mine on August 27, 1914. The company had made a voluntary settlement of \$1,500 with the relatives of Richard Munro, who was killed at the same time as McIntosh, but refused to settle the McIntosh case. The company through its counsel, Mr. Joseph Martin, K.C., took the ground that McIntosh had, contrary to the provisions of the Miners' Act, exploded the charge himself, instead of waiting for the fire-boss to come, and was therefore the author of his own disaster.

A QUEBEC COMPENSATION CASE.

Through a workman's disregard of a warning against using an elevator on mill premises that were in course of construction for the Dominion Flour Mills Company, Limited, on St. Antoine Street, St. Henry, the Maryland Casualty Company has failed in its action to recover from the Flour Mills Company \$1,800 which was paid to the widow of John Creegan, who was killed by a fall from the elevator on March 2nd, 1912. Mr. Justice Monet dismissed the casualty company's claim, and the case was inscribed for review. The court of review has confirmed the judgment of Justice Monet, Mr. Justice Demers, in announcing the court's decision, stated that the evidence conclusively proved that the workman's death was caused through an act of his own imprudence, and an act committed contrary to a specific warning. On the question of law, however, the court held that the Maryland Casualty Company was correct in taking action against the Dominion Flour Mills Company, and its failure was due, as the court below had found, to a want of prudence on the part of the victim, who knew that the elevator was defective, and had been warned of its condition.

WOULD CHANGE COMPENSATION ACT.

Basing their action on a statement alleged to have been contained in a circular of the Michigan Manufacturers' Association to the effect that it had blocked the efforts of the Michigan Federation of Labor to secure amendments to the industrial compensation act at last winter's session of the legislature, the Federation is now taking steps to go over the legislature's head, says the *Michigan Manufacturer*. It has had amendments prepared which it is at present planning to submit to the voters of the state through the initiative provisions of the constitution. These amendments were proposed

by President Claude O. Taylor, of the federation, in his last annual report.

Among the changes proposed are that a better minimum and maximum rate of compensation be allowed; compensation be paid from the beginning of the period of disability; medical attention be given injured as long as necessary; the rate of compensation be not less than 66 2-3 per cent. of beneficiaries' wages; more generous allowance be secured as to the length of time during which payments shall be made for accidents resulting in amputation; widows whose husbands are killed in industries shall receive compensation during widowhood and that additional compensation should be granted widows, based on the number of children surviving; the attorney-general be required to defend the decisions of the industrial accident board and that the board be empowered to engage attorneys to prosecute claims for injured men, and that totally disabled employees be paid compensation during life and that the same be paid for disability or death resulting from occupational diseases.

HOBBS MADE BY THE PRATT & WHITNEY CO.

In an article appearing in the January issue the statement was made that high speed thread milling hobs were now being manufactured in Canada for the first time. Such is not the case. Immediately after commencement of work in Canada on H. E. shells, the Pratt and Whitney Co. of Dundas, started manufacturing these hobs. They have up to the present time supplied seventy-five per cent. of the high speed hobs thus far used in this work.

REMINDER TO BUYERS OF SHAFTING.

Manufacturers, who are figuring on installing new shafting in their plants, are reminded that a complete new set of prices was put into force by the makers of shafting in the United States and Canada, last March. Many purchasers are continuing to refer to the old price lists, and this of course upsets their calculations. It would be as well for all manufacturers, who are in the market for shafting, to send to the makers for up-to-date price lists.

MILLIONS IN SCRAP.

The Pennsylvania Railroad doesn't throw away anything that has any value to man or beast. It sells everything the company has no further use for, if there is any market for it. In 1914 the scrap material sold brought in to the company \$2,157,241.24, and this was \$1,000,000 less than in 1913. Waste paper alone sold for \$19,211, oil barrels for \$22,439, and old rubber for \$15,222. Locomotives and wooden passenger cars sold for \$114,326. Other odds and ends brought in \$121,997. Old wheels, metals and wrought iron yielded more than \$780,000.

WAREHOUSE SPACE TO LET IN WINNIPEG.

"TO LET, on and after March 1st, one floor in our modern warehouse on Dewdney Street, opposite C.P.R. station, Regina. Size of building, 50 x 108; steam heated throughout, elevator, railway siding, office accommodation, also good vault in building. Water and heat supplied by ourselves to tenant. The balance of this building is occupied by ourselves and the Northern Electric Co. A splendid opportunity for anyone requiring a distributing warehouse in the west.

"For terms, etc., apply to B. F. Ackerman, Son and Company, Limited, Peterborough or Regina."

TRANSPORTATION

By J. E. WALSH

TRANSCONTINENTAL RATES.

THE following statement shows the various changes which have been made in the rates, minimum weights and mixed carload arrangements since the issuance of tariff C.P.R. No. E-2632, C.N.R. No. E-706, G.T.R. No. C.N-154, I.C.R. No. C.X-65, effective June 1st, 1915.

A great many of the changes shown are the outcome of an investigation by Mr. S. R. Parsons, Vice-President of the Association, and Mr. J. E. Walsh, Manager of the Transportation Department, made at Vancouver, Victoria and New Westminster in October, 1915, and various meetings held since with the carriers and interested manufacturers.

Members should secure a copy of Supplement 6 to tariff C.P.R. E-2632, C.N.R. E-706 and Sup. 7 to G.T.R. C.N-154, I.C.R. C.X-65, which contains the various items mentioned in the statement, so that they will be in a position to properly make shipments to secure the new rates.

COMMODITY	OLD			NEW			REMARKS
	Rate in Cents per 100 lbs. C.L.	L.C.L.	Min. Weight in lbs.	Rate in Cents per 100 lbs. C.L.	L.C.L.	Min. Weight in lbs.	
Agricultural implements	1.45	....	20,000	1.33	....	24,000	Also adds road scrapers, not formerly allowed in mixture.
Alabastine	1.05	....	40,000	.90	....	40,000	
Ammonia	1.84	....	24,000	1.05	....	30,000	Rate, \$1.00 any quantity also provided on returned empty cylinders.
Bags, burlap, cotton or paper lined..	1.58	2.32	24,000	.90	1.78	40,000	Allows shipping with other bags and baggings.
Brass, bronze or copper rivets or screws	2.97 3.62	}	.....	....	2.18	.....
Brushes	1.84		20,000	1.35	2.05	30,000	Brushes and brooms may be shipped in mixed C.L. at \$1.35, min. wt. 30,000 lbs.
Brooms	1.58	}	20,000	1.35	2.25	30,000	
	2.97						
Calcium, Carbide of	1.35	....	30,000	.95	....	60,000	This is a new item. The former rate of \$1.35, min. 30,000, is still in effect and rate from Shawinigan Falls is reduced from \$1.40 to \$1.35.
Canned goods, including jams, jellies etc.	1.00	....	40,000	.90	....	60,000	Formerly if jams were included car would have been charged \$1.20, min. 40,000 lbs.
Jams.....	1.20	....	36,000	.90	....	60,000	
Cotton work shirts and overalls.....		2.20	.....	1.70	2.20	20,000	New item allows shipping in mixed C.L. with cotton and woollen underwear, sweaters, hosiery, etc.
Ladies' and children's cotton under- wear, cotton dresses and shirt waists	3.20	.....	.....	....	2.40	.....
Cotton towels and towelling.....	2.10	.....	.....	1.23	1.78	30,000	New item allows shipping in mixed C.L. with cotton piece goods.
Electrical goods	2.32	....	24,000	1.75	....	30,000	
Incandescent lamps	2.32	7.24	16,000	2.15	4.40	16,000	
Storage battery parts	2.32	....	20,000	1.35	....	30,000	
Fish, fresh or frozen.....	1.84	....	24,000	1.50	....	24,000	
Fish, dried, salted, smoked, pickled.	1.05	1.95	36,000	1.05	1.95	36,000	The new arrangement allows shipping of mixed cars, fresh, frozen, dried, salted or smoked, and pickled fish at C.L. rate and actual weight, subject to min. charge fresh fish rate at 24,000 lbs. This makes a reduction in Mulgrave, N.S., rate from \$2.01 to \$1.58 on fresh fish or frozen fish.
Furniture, new	1.84	....	24,000	1.84	....	14,000	New item allows shipping filing cabinets, cases, document files and supplies, etc., with furniture at min. 14,000, rate \$1.84, whereas formerly min. was 24,000, rate \$1.84 on such a mixture.
Axes, adzes, crowbars, mattocks, mauls, picks, sledges and wedges.	1.40	....	40,000	1.00	....	50,000	
Crowbars, mattocks, mauls, picks, sledges, wedges	1.40	....	40,000	.90	....	50,000	
Augers, post hole, clamps, carriages, grindstones and fixtures, iron vises, pruners, tree, sad irons (in- cluding self-heating), screws, bench	1.58	....	36,000	.90	....	36,000	
Files and rasps	2.20	....	.....	....	1.65	.....
Shovels	1.45	....	24,000	1.00	....	30,000	
Hose, Rubber, in cases.....	1.84	....	24,000	1.38	1.78	30,000	
	1.78	1.78	30,000				

Hose, Rubber, in crates or bales.....	1.84	1.93	24,000	1.38	1.93	30,000	
Glue	1.58	2.97	24,000	1.13	1.68	30,000	New item allows mixing with ink and mucilage.
Barrels, drums or kegs, iron or steel. 2.32	....	....	12,000	1.50	....	16,000	
1.84	....	....	18,000	1.33	....	22,000	
Iron or steel screws.....	.65	....	60,000	.65	....	60,000	
(For wood)	1.58	2.32	24,000	.90	1.45	40,000	New item allows shipping with bolts, nuts, rivets, etc.
Brackets, steel; butts; hangers, door; hasps; hinges; hooks, gate; pulleys, sash; staples; tracks, door..	1.58	....	40,000	.90	....	50,000	
Butts, hinges, hasps, hooks, links, etc.	1.45	1.45	30,000	.95	1.45	40,000	
Chain and link belting.....	1.50	1.50	30,000	.85	1.43	50,000	
Fire plugs, fire hydrants, water gates and iron body gate valves.....	1.58	....	24,000	1.10	....	36,000	
Nails, horseshoe	1.00	1.53	40,000	.80	1.53	50,000	
Steel, sheet, No. 12 and lighter.....	.95	....	40,000	.75	....	60,000	
Meters and regulators	3.62	....	....	....	2.20	....	The new rate expires Dec. 31, 1916.
Cottonseed and linseed oil.....	1.58	....	24,000	1.00	....	30,000	
Oil, cycle, gun and machine.....	3.62	....	....	....	2.32	....
Wallpaper	1.33	2.32	30,000	1.15	2.00	30,000	
Pumps, etc.	1.58	....	24,000	1.45	....	30,000	
Rubber belting, footwear, hose, packing, tiling, solid or pneumatic tires	2.38	....	30,000	1.75	....	24,000	
Rubber, footwear	2.95	....	....	....	2.35	....
Rubber hose, in cases, crates or bundles	1.78	....	30,000	1.38	....	30,000	
Rubber packing and belting.....	1.84	....	24,000	1.38	....	30,000	
Rubber, pneumatic tires	3.20	....	....	....	3.20	....	This change eliminates the 200-lb. per package restriction formerly applicable on such shipments.
Rubber, pneumatic tires	2.97	....	16,000	2.38	....	16,000	
Rubber tires, not pneumatic	3.20	....	....	....	1.95	....
Sad irons, except self-heating.....	1.45	1.45	30,000	.95	1.45	36,000	
Saws, bands circular, crosscut and hand. . . . .	....	....	....	1.58	....	30,000	This change allows the mixture of saws at C.L. rate, formerly not allowed.
Scales	1.58	....	24,000	1.30	....	30,000	
Sledges, wedges, mauls and track chisels	1.45	1.45	30,000	.95	1.45	40,000	
Tacks, iron or steel	1.58	1.88	24,000	1.05	1.88	30,000	
Tin cans, boxes, pails	1.10	....	22,000	1.10	....	20,000	
Tin cans, boxes, pails and milk cans. 1.05	....	....	24,000	1.05	....	20,000	
Twine and cordage	1.05	2.97 } 30,000	.85	1.75	40,000		
....	2.32	....	....	....	....	....
Washing machines, clothes wringers and churns	1.58	....	20,000	1.10	....	24,000	
Wire, insulated or covered.....	2.32	....	....	....	2.00	....
Wire fencing . . . . .	.90	1.90	36,000	.85	1.90	30,000	
Wire screening, netting and wire cloth	1.75	....	30,000	.90	....	36,000	
Wire screening, netting, cloth, cable or rope, guy strands.....	1.75	....	30,000	.90	....	40,000	
Wire cable or rope and guy strands..	1.20	....	40,000	.80	....	50,000	
Wire, telephone or electric light	2.97	....	....	....	....	....
cables, copper wire, etc.....	1.20	2.32	30,000	1.20	2.00	30,000	
Cartridges	1.25	....	30,000	1.13	....	30,000	

ADVERTISE B. C. LUMBER.

Present prosperity, public revenue and future development in the Province of British Columbia depend very largely on the profitable marketing of our forest products. Hence the situation of the lumbering business is viewed with the greatest concern by the Government, according to a recent statement by Hon. W. R. Ross, and every method of restoring the industry to sound health is being studied by us. For the moment we are concentrating upon the conservation of lumber markets, to secure to our products their full legitimate market, and check the shrinkage in consumption from which wood has suffered so seriously in the past few years. Government campaigns of advertising have, in the past, been of considerable effect when applied to immigration or the marketing of fruit. The official campaign we now have in progress is, I believe, the first one that has been launched on behalf of the lumbering industry. We intend to push the work vigorously and to use the most effective and modern methods of publicity. Pamphlets, newspaper articles and advertisements, farm building bulletins, moving pictures, and adaptations of some of the fertile ideas so successfully developed in the

Forest Protection Movement in the West will all be used in an intensive artillery fire directed at the consumer. We are fortunate in securing the hearty co-operation of the agricultural authorities and other agencies now actively engaged in pushing the better-farming, more-lumber-consuming movement.

DINNER TO MAJOR MOODIE.

On Thursday, the 27th January, the executive committee of the Hamilton branch tendered a complimentary dinner at the Hamilton Club, to Major Roy R. Moodie, the chairman of the branch, who is leaving shortly for the front as junior major of the 86th Machine Gun Battalion from Hamilton. Mr. Cyrus A. Birge, past president of the Manufacturers Association, occupied the chair, Mr. H. J. Waddie, acting chairman of the Hamilton branch, being vice-chairman. The good wishes of the manufacturers were expressed to Major Moodie by the members present to which Major Moodie made a suitable reply. He is the first member of the Hamilton executive to leave on active service.

CLAY PRODUCTS ASSOCIATION CONVENTION.

There was a good attendance at the fourteenth annual convention of the Canadian National Clay Products Association, held in Toronto on January 18, 19 and 20. The proceedings were mainly of an educational character, several papers and addresses dealing with technical phases of clay product manufacture being delivered. The officers elected were: President, J. E. Frid, George Frid Brick Co., Limited, Hamilton; 1st Vice-President, A. F. Greaves-Walker, Sun Brick Co., Toronto; 2nd Vice-President, Thomas Kennedy, Dominion Sewer Pipe Co., Swansea; 3rd Vice-President, William Burgess, Don Valley Brick Co., Toronto; Secretary-Treasurer, Gordon C. Keith, Toronto; Councillors: C. B. Lewis, Toronto Pressed Brick and Terra Cotta Co., Milton; T. Graham, Shale Products Limited, Inglewood; Albert Neall, Kingston Brick and Tile Co.; Hubert Desjardins, Montreal Terra Cotta Co., Montreal; Walter Clark, Sarnia; Ryland New, Toronto and Hamilton Sewer Pipe Co., Hamilton; D. A. Lochrie, James Lochrie, Toronto; J. S. McConnell, Milton Pressed Brick Co., Milton; C. A. Miller, Prices Limited, Toronto.

An important feature of the convention was the address of W. W. Pearse, City Architect, Toronto, who emphasized the necessity for the establishment in Canada of a bureau to test and compile data on building materials. Such information was practically unobtainable and had to be secured from the United States, where climatic conditions were often very different.

Mr. Pearse asked for the co-operation of the clay workers to establish this bureau and would like to see tests carried on under actual conditions, such as in a wall, the effect of eccentric loading and the relative merits of lime and cement mortar in the final strength of the walls. Following the discussion the following resolution was passed:

"Resolved, That we, the Canadian National Clay Products Association, urge that the Dominion Government, through the Commission of Conservation or other branch of the public service, extend the work they are carrying on at McGill University, Clay Testing Laboratories at Ottawa, etc., so that they can establish a central bureau and supply accurate information on Canadian building materials to all municipalities requiring same."

The need for something of this nature was shown at the inquiry into the causes of the collapse of the chimney at the new gymnasium of the University of Toronto, where no one could testify how much weight green mortar would sustain. The necessity for compiled data on Canadian fireproof material is very pressing, and it is high time Canadians had their own data.

Chas. A. Miller, Inspector of Clay Products Plants under the Workmen's Compensation Act, contributed an address on "Safety in Clay Products Plants." Mr. Miller gave the statistics on accidents during the year 1915. These show that the railroads claim the greatest number of victims, with the iron and steel industry making almost as heavy a toll. In the clay factories of Ontario no fatal accidents occurred, and only about sixty serious cases were reported. Statistics show that the majority of accidents occur in the clay beds, rolls, gears and from cables and set screws. The discussion, which was very spirited, pertained chiefly to the Workmen's Compensation Act, and the effect on the company as well as the workmen. The question of first aid to an injured workman came in for a heavy share. Who should pay the doctor who is called in for first aid? The company are not bound to call him under the Act. All they have to do is send the man home and notify the Board, and it may be some time before the Board can adjust the case and pay the victim. In the meantime he might starve. If the company calls a doctor he can come on the com-

pany for his fee. This is one item that needs attention, but it was the opinion of the convention that the Act is a valuable asset and in time will become adjusted to the special conditions and be a very valuable factor for good.

YOUNG MANUFACTURER GOING OVERSEAS.

The appointment of Captain Paul Sise as adjutant of the 148th, the new battalion now being organized in Montreal by Lieut.-Col. Magee for overseas service, has recently been announced. At the outbreak of the war, Captain Sise, who was formerly connected with the Victoria Rifles, joined the Canadian Officers' Training Corps, which is affiliated with McGill



CAPTAIN PAUL F. SISE

Vice-President and General Manager of the Northern Electric Company

University. When the McGill Auxiliary Battalion was formed, Captain Sise was in command of "D" Company and later of "A" Company, McGill Contingent, Canadian Officers' Training Corps. Because of the high executive position which Captain Sise held with the Northern Electric Company, and the responsibilities which such a position entails, his decision to enlist for overseas service not only sets a splendid example to his fellow countrymen, but typifies the high standard and calibre of men who are answering the call of their country in time of need. Captain Sise was born on November 10th, 1879. He was educated at Bishop's College School, Lennoxville, Que., and at McGill University from which he graduated as B.Sc. He was one of the organizers of the University Club in Montreal, is a member of the St. James' Club and a Governor of the Western Hospital.

John B. McDonald, the oldest resident of Tiverton, and the pioneer manufacturer of Bruce County, is dead. For many years he conducted a foundry business in Tiverton, manufacturing plows, implements, stoves, iron school desks, etc. He was highly respected in the community.

THE CANADIAN BANK OF COMMERCE

Addresses of President and General Manager at THE ANNUAL MEETING Canada's Position in War Times Reviewed

The following addresses are from men well qualified to speak on the subjects dealt with.

PRESIDENT'S ADDRESS.

The Directors have referred in their report to the death of our late General Manager and Mr. Aird has just spoken of him with the warmest appreciation. I knew him longer than most of his associates—indeed we worked together over thirty-five years ago—and I have lost not merely a business friend but one for whom I cherished the deepest affection.

When in 1913 we came to the end of a period of expansion we found ourselves like a healthy but overgrown youth, still dependent upon the mother. We had to sell over 400 millions of securities in order to settle our foreign debit balance for the Dominion fiscal year ending March 31st, 1913. During the year ending March, 1914, the difference between our exports and imports decreased by 130 millions, but still left over 300 millions to be provided by the sale of securities in a market very much more difficult than that of the year before. More than one half of the year ending March, 1915, was affected by the war, and the situation was still further improved to the extent of over 144 millions. For the six months ending September, 1915, there is a further improvement of 80 millions as compared with the previous year, but this same half year, when compared with the corresponding period in 1914, shows an improvement of 109 millions. For reasons explained a year ago, coin and bullion are left out of our totals.

INTERNATIONAL POSITION.

The following figures will illustrate the astonishing change in our international position:—

	Imports	Exports	Excess Imports	Excess Exports
1913	\$686,515,536	\$377,068,355	\$309,447,181	.....
1914	635,383,222	455,437,224	179,945,998	.....
1915	497,376,961	461,442,509	35,934,452	.....
6 months ..	228,335,678	273,377,082	.....	\$45,041,404

In order to estimate our true position, we must add to the excess of imports the interest due upon Canadian securities held abroad, now estimated at about 140 to 150 millions, and we may count upon any excess of exports as available to pay this interest. During the last half of the present Dominion fiscal year the effect of the export of our great crops, of our manufactured munitions, prepared foodstuffs, cattle, horses, etc., will be felt, and the excess of exports by 31st March, 1916, should be about equal to our interest charges payable abroad.

In 1913 we knew that we had used our credit to the available limit, but we hoped gradually to move into safer conditions. If any one had suggested that we could so adjust matters within three years as to have a credit balance in our foreign trade, instead of a debit, and that this credit balance would be large enough to offset our interest payable abroad, our answer would have been that it was folly to indulge such hopes.

The improvement of 144 millions between March, 1914, and March 1915, was brought about by decreasing our imports by 138 millions and increasing our exports by only 6 millions. This was due to a tremendous contraction in the business of all trades requiring such imports on the one hand, and on the other to a serious decline in exports of the products of agriculture and of the mine, which was a little more than offset by the increase in animal foodstuffs and manufactured munitions. The decrease in imports shows in an almost unbroken line of articles, the exceptions being mainly in such materials as jute cloth, wool, hides, leather, dyes, rubber needed in the manufacture of munitions, and about \$3,000,000 in value of articles for the use of the army and navy.

EXPORTS INCREASE.

The improvement of 109 millions in the first six months of the present fiscal year, that is, down to September last, is caused by a decrease in imports of 52 millions and an increase in exports of 57 millions. The exports show handsome increases especially in manufactured munitions of war, but they still suffer from the effects of the poor crops of 1914 and there is an actual decline of 12 millions in agricultural products. The decrease in imports is again general but an increased quantity of binder twine was imported on account of the unusually large crops of the season, and there were large increases in raw material needed for the manufacture of munitions and in manufactured articles intended for the use of the army and navy, the latter amounting in value to 10 million dollars during the half-year.

This demonstration of what we can accomplish under pressure has, of course, greatly strengthened the credit of Canada, so that while, for obvious reasons we cannot at the moment sell securities in Great Britain or in Europe, we are building up a market for them in the United States which, when we consider the enormous increase in wealth taking place in that country at the moment, we may well hope is not of a temporary character. During the past year, leaving out the last half of December, the sales of Canadian securities at home and abroad amounted to about 335 millions. This includes nearly 220 millions of Government securities and many sales of other securities which are practically refunding operations. The sales were divided as follows:—

In Great Britain, mostly for refunding purposes ...	\$ 43,800,000
In United States	144,800,000
In Canada	147,100,000
	<hr/> \$335,700,000

The Canadian figures are increased by the Dominion loan of 100 millions, very little of which has yet been paid to the Government.

The sales of municipal bonds, at one time during the year the matter of chief concern to those interested in Canadian securities, amounted to about 64 millions, divided almost equally between the United States and Canada.

The power of the United States to lend, when we remember that the gold pool of 100 millions established to protect her own credit with foreign countries was dissolved only in January last, is one of the surprises of the war, but we must also remember that this power to lend will be sharply tested as the war proceeds. A rough estimate of the amount of securities sold and credits established shows that the sum of at least 800 million dollars has already been placed directly at the credit of the Allies, while the indirect credits and the contracts outstanding are beyond our calculations. Large loans have also been made to neutral countries, and something has been lent even to Germany.

OUR PRODUCTS IN DEMAND.

In Canada the building of almost all private or public works, causing a lockup of capital, has stopped for the moment; individuals are buying less extravagantly, even if there is not sufficient effort to economize; everybody who has not enlisted can find work to do; and for a very large part of our natural production from the farm to the machine-shop, there is a persistent demand by the Allies. All this tends to produce a condition of prosperity, with ease in the money market, and if, like the United States, we were a neutral country instead of one engaged in the war, our national wealth would be increasing at a pace undreamed of in our past history.

We are proud, however, that we are not among the neutrals, but among those who are fighting for the liberty of the world, and for this, in addition to the loss of life which our honor roll represents, we ourselves must bear now and must ask our children to bear, a great cost in money. A year ago we were greatly pleased because Great Britain had undertaken to lend us for the moment the money with which to pay for our share of the war. By midsummer the Dominion Government also needed money for other expenditures, because ordinary revenues had been disorganized by the war and many public works could not with wisdom be closed down. Accordingly a loan of 45 millions was obtained in New York last July, and this was a happy accomplishment for the following reasons: London was ill-prepared to bear any load not absolutely necessary, and Australia needed help which could not be obtained elsewhere; New York was the only market well supplied with money, and it is in any event the point where our international settlements are mostly made; this was our first Government loan in the United States and the new market was desirable. Apart from these reasons, the value in New York, and therefore in Canada, of the pound sterling in London had by this time fallen so low that we could not afford to use the help for war expenses placed at our disposal by Great Britain. We have, of course, no actual knowledge of the facts, but it is probable that from about this time the Dominion Government ceased to use the funds put at their disposal by the British Treasury for war expenses, and very soon the possibility of floating a war loan in Canada was under discussion. A Dominion loan offered in Canada is as great a departure from the past as one offered in New York; and although we are still in the midst of moving the greatest crops in our history, in volume and in value, and are doing it with our usual machinery more or less paralyzed, because of the state of the foreign exchanges and the scarcity of tonnage, yet, when a domestic loan of 50 millions was offered in November the subscriptions exceeded 100 millions.

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MUNITIONS AND CREDIT.

Concurrently with the discussion of this loan, we were sharply made aware that if we make munitions for the Allies we must to some extent give credit for such munitions in the same manner as has been done in the United States. We cannot take securities in payment for as large a percentage of the cost as the United States is able to do, because we are ourselves bearing the cost of war and because we have so little accumulated wealth upon which to draw, but to some extent as yet unascertained we shall doubtless have to take Treasury or other Government securities in order to facilitate such purchases. Therefore, in view of the great success of our domestic war loan, the Minister of Finance, with the unanimous concurrence of the country, accepted subscriptions for 100 millions, instead of 50 millions, with the intention of using temporarily the additional sum thus secured to finance the payments for munitions on behalf of the Allies.

THE GREAT CROP.

A year ago everybody in Canada was urged to put into his particular effort in life an energy and seriousness of purpose adequate to the needs of the great war. If we cannot fight we should help in the countless other ways that are open to us. Nature smiled on our efforts, and we have been blessed with the greatest crops ever known in any new country. This has silenced the pessimists, and our great West is more sure of its future than ever. Indeed, for loftier reasons all Canada feels much more sure of its future than it has ever done before. That overgrown youth, leaning upon his mother, has suddenly found himself, and to the call to play the man has responded so well that his place among the younger nations and his influence in the greatest empire in the world are assured. The war, however, is still at its height, and there is little sign of such an end as we must attain if we are to follow our natural course in peace. We cannot afford to relax our energies for a moment; such efforts as we made in 1915 should be increased in 1916, and the need for personal and public economy is not lessened a particle by the prosperity incidental to the war. I notice that when some citizen takes the trouble to indicate particular forms of economy he is met with criticism. Of course, economy for one man would be great indulgence for another, and each must settle for himself the scale on which he can lessen his expenditure. We are exceedingly fortunate that such an income tax as that in Great Britain does not settle the question most drastically for each of us. It must be clear that every time we buy something outside of Canada we weaken our national finances, unless our purchase consist of material which will in some form or other be exported again. This does not mean that we can avoid making large purchases abroad, but that we can avoid unnecessary purchases. It must also be clear that when any man avoids expenditure which it would be quite natural to make in times of peace, he can invest the amount saved in war loans, and every dollar saved and thus invested is a blow struck on behalf of the Allies. So well is this need for personal economy understood in England that some of the great banks who have not heretofore had savings departments like those in Canadian banks have now established them.

CLEARING HOUSE RETURNS.

The Clearing House returns show a further decline from \$8,074,978,000 in 1914 to \$7,797,430,000, a decrease of 3.44 per cent. for the year just closed. In all Western cities the decline is very marked except in Winnipeg and Brandon, where the figures show an increase. In the East there is a moderate decrease in Toronto, Montreal is almost unchanged, and at four other points there are increases.

The contraction in ordinary business, which began in 1913 and was greatly increased by the war, is most forcibly illustrated by the figures of the building permits in our four principal cities. For the last four years they are as follows:—

	1912.	1913.	1914.	1915.
Montreal	\$19,642,000	\$27,032,000	\$17,619,000	\$7,495,000
Toronto	27,401,000	27,038,000	20,672,000	6,651,000
Vancouver	19,388,000	10,423,000	4,484,000	1,593,000
Winnipeg	20,475,000	18,621,000	12,160,000	1,826,000

A drop from \$87,000,000 to \$17,500,000 in three years is so great as to affect severely almost every branch of trade, particularly those directly connected with building, but it is a matter for congratulation that we have been able to withstand this sharp readjustment and still maintain our prosperity, the very thing we feared we might not be able to do with credit to ourselves.

SUPPLYING OF MUNITIONS.

Few things, except the actual fighting at the front, recruiting and the financing of the war, have interested us more than the supplying of munitions, and especially Canada's share in that vitally important work. In a general way we know that we have done more than was expected, and have done it better and more quickly, but just how much we have done is not known to the general public. I am glad to be able to give a few facts which will at least help us to a better understanding of the matter. The Imperial Munitions Board have given orders in Canada for 22,800,000 shells, having a value of \$282,000,000. If we add to this the orders for cartridge cases, primers, forgings, friction tubes, etc., a total of \$303,000,000 is reached. For this work there had been paid out by the end of the year about \$80,000,000, and the monthly output is now valued at more than \$30,000,000. There are 422 plants working directly on these orders, and how much employment is indirectly due to them is beyond our skill even to suggest. The work of the War Purchasing Commission is not so easy to sum up. This body does not deal with shells, but it deals with almost every other requirement of the army and purchases about five thousand different kinds of articles. As the appropriation for the year just passed amounted to \$100,000,000, we can form some idea of the importance of its operations, although there are no figures

available to show how this has been spent. The pay of officers and men, the cost of all engineering operations and other large items coming under the direction of the Department of Militia and Defence, are met out of this appropriation. It is estimated that about one million pairs of boots have been purchased at a cost of more than \$3,500,000. Our woollen and knitting industries have received large orders, larger even than they could conveniently execute within the specified time. Up to the present all the cloth used for our soldiers' uniforms has been made in Canadian mills, but it is not clear that our mills can continue to fill all our requirements. From figures gathered from various sources, we estimate that the value of the clothing ordered for the use of the Canadian troops since the creation of the Commission in May has been from \$10,000,000 to \$12,000,000, while orders from Great Britain and the cost of clothing the earlier contingents should make the total at least \$20,000,000. The British orders in Toronto at the moment amount to nearly \$1,000,000. The demand for articles made of leather has been very extensive, and while most of the leather used is tanned in Canada, our trade reports record the importation of considerable quantities of hides and leather. Socks have been ordered by the million pair at a time, and our mills are far behind in their deliveries. I cannot more than refer to such items as rifles and small ammunition, telephone equipment, tools, rubber articles, camp, barrack and hospital equipment, etc., but perhaps what I have said will help us to understand that the purchases for the Canadian army at the moment are almost as great as those required for the army equipment of Great Britain in times of peace. We have during the year sold in Great Britain canned corned beef to the value of about \$3,300,000, frozen beef about \$6,000,000, and bacon about \$9,000,000. The bacon would have been sold in the British market in any event, but the canned and frozen beef represents new trade. We cannot ascertain the number of horses or of live cattle sold (the latter mainly to France) for army purposes, nor can we estimate the value of the shipments of wheat, flour, oats, hay, etc., attributable to the war, or of the orders for munitions from France and Russia, which have been placed in Canada, but if outstanding contracts are filled and the war continues throughout 1916 it seems clear that during 1915 and 1916 there will have been spent in Canada for war supplies considerably more than \$500,000,000. You may be interested to know something regarding the Bank's part in this work. We have as customers 22 of the largest shell makers, 20 makers of clothing and of leather goods, 8 of the largest suppliers of provisions, besides many who supply other classes of munitions. Including the farmers, the number and variety of people among our customers who benefit by the supplying of munitions is beyond calculation. We have learned in meeting the sudden demand upon our industrial capacity to do many things which should count in our future. We have learned to shift our machinery rapidly to new uses, to make objects of a more complicated character which allow less margin for bad workmanship, to smelt copper, lead and zinc; indeed, to do many things which before the war did not seem possible in the present stage of our development.

READY FOR THE FUTURE.

In a new country like Canada it is as natural to try and forecast the future as it is to breathe. Without such a form of enjoyment life would often be unbearable. Every day, however, since the war began has shown us how unable we are, with our previous narrow experience, to look ahead even for a month. We are living amid events so tremendous that it is our duty to be steadfast and ready for any new turn in the kaleidoscope of fate and not to waste time in guesses regarding peace and the aftermath of the war; still, there are some important questions which press upon our minds whenever the strain of the war lessens for a moment. When the war ends and orders for munitions cease, throwing many out of employment, when the Canadian soldiers begin to come home, and the discharged soldiers of the Allies follow them to this land of opportunity, with many others who wish to forget the horrors of Europe, how shall we find ourselves prepared for them? We shall probably have been enriched in some respects by the war, and the demands upon our industries are likely to increase, although not to an extent which will absorb their full output for some time to come. In any event, we shall probably not be so much engaged in building for the future as endeavoring to turn out products which will justify what we have already done. We shall therefore hope that our soldiers and our immigrants will turn to the land far more generally than have the immigrants of the last ten years. As Canada is the last great area with unploughed land in the temperate zone and under a democratic government, and as the returning soldiers will as a rule wish for out-door work, we may hope that they will very generally become farmers. If so, should we not, despite the overwork incidental to the war, be preparing for a great settlement on the land?

IMMIGRATION.

We have learned a lesson from indiscriminate immigration; we know what it means to have citizens who are not yet Canadians in their sense of loyalty to the Empire, and if we are wise we shall base our estimate of the value of each new arrival upon larger considerations than that of mere material prosperity. Can we plant in many centres, and in every province in Canada from the Atlantic to the Pacific, soldier-farmers who will themselves be centres of loyalty and whose grandchildren will boast that they were sired by men who fought in the great war for liberty? If we can, we shall have done much to assure the safety of Canada and its institutions, and we shall thus make this country far better worth while than if we miss this golden opportunity. To succeed, however, we must organize so as to secure the land at fair prices; we must lend the necessary money on such terms that its return will be effected by a reasonable rent charge; we must continue to lend for later improvements in the same manner, and finally, so long as the soldier-farmer shows that he is making good, we must back him somewhat better than the man who has not fought for us. Only the Government can do these things, but I am sure that it can be done so as to help merely those who deserve to be helped, so as to ensure success in the majority of cases, and so as to pay in some slight degree our debt to those without whose courage all that we and our forbears have done to make Canada a nation would be as naught.

GENERAL MANAGER'S ADDRESS.

The statement presented to you to-day is a striking illustration of our policy during the year. The net profits amounted to \$2,352,035, or 8.25 per cent., upon the moneys which belong to the shareholders of the Bank, that is, upon the total of the paid-up Capital and Rest. This is a decrease of \$316,197 from the figures of the preceding financial year, but, under the conditions which have prevailed since we last met, we trust that you will consider the result satisfactory, especially as we have been able to continue the payment of the usual dividend of 10 per cent. per annum and of two semi-annual bonuses of 1 per cent. each, a total of 12 per cent. We have, as usual, appropriated \$80,000 for the Officers' Pension Fund, and after paying the war tax of 1 per cent. upon our note circulation, amounting to \$122,906, subscribing \$5,000 to the British Red Cross Fund and reserving as a special appropriation the sum of \$1,000,000 against possible further depreciation in the values of the stocks, bonds and similar securities owned by the Bank, we have been able to carry forward \$461,892 at the credit of Profit and Loss Account.

AN ADDITIONAL PRECAUTION.

It is the time-honored custom and wise precaution of every general manager of a Canadian bank upon first assuming the responsibilities of his position to assure himself that each individual asset of his bank represents the value assigned to it in its books and published statements. Upon undertaking this important duty, I found that the conditions brought into being by the war, and particularly the restrictions placed upon the leading security markets of the world, had made the task one of unusual difficulty. The hazards of war have not only seriously lowered the prices of all securities, but they have introduced an element of doubt into existing values which it is difficult to allow for in dollars and cents. As a matter of additional precaution, therefore, we have taken the step of reserving out of Profit and Loss Account, as a special provision against these contingencies, the sum of \$1,000,000. After the war has been successfully prosecuted to a close, it is probable that some, if not all, of this amount will come back sooner or later into profits.

NO UNNECESSARY EXPENDITURES.

Our Bank Premises Account as well as the accounts of Real Estate owned and Mortgages held, remain practically stationary, the generally unsettled condition of affairs not having warranted our undertaking any expenditure on new premises which did not appear to be absolutely necessary. We dealt with this matter fully in our report of last year, and for the reason therein set out we feel that no further appropriation is necessary, the figures shown in our balance sheet being well below the limit of 50 per cent. of the actual value, as has been our policy with respect to this particular asset.

The note circulation stands in the balance sheet at \$16,397,907 an increase of \$1,455,350 as compared with the figures of a year ago and only a few thousand dollars short of the record figures of 1912. This is due to the demands made upon us for moving the large grain crops of the country. The deposits of the Bank show a satisfactory increase distributed under every heading, the total increase being slightly over \$13,000,000. Bills Payable again show a considerable decrease, the figures being \$1,501,442 as against \$3,924,151 a year ago, or a decrease of \$2,422,708, due largely to the effect of the war upon our foreign exchange business and to the unsatisfactory conditions which have prevailed in the exchange markets during the year.

In view of the general situation we have thought it prudent to keep strong in cash reserves, particularly in gold, the medium for the settlement of international obligations, and that it might be the more readily available for such purposes we have carried an unusually large proportion of our holdings at points outside of Canada. Our total holdings in coin and legal tender are \$39,901,993. If to this amount we add the balances due us by other banks and correspondents, our holdings of government and municipal bonds and stocks, and call and short loans, our liquid assets amount to \$101,173,357, or 47.62 per cent. of our liabilities to the public.

CURRENT LOANS INCREASE.

Total Current Loans show an increase of \$2,037,254, more than accounted for by an increase of \$3,704,464 in Call and Short Loans due to the policy of keeping our assets in the most liquid shape possible during the unstable conditions which are the outcome of the war. The fact that our loans show an increase despite the shrinkage which has taken place in general business, bears witness to our earnest efforts to assist the business community to the utmost of our ability consistent with prudence, and should be sufficient answer to those persons who assert in the press and on the public platform that the banks have failed to provide the necessary financial assistance for the commerce of the country. There are some who go further, and by quoting the figures of Canadian bank deposits without setting alongside these figures those of the loans, mislead the public and cause them to look upon the banks as enemies to the public welfare. To all such I say, the figures of our balance sheet are sufficient answer. There has been a reduction of \$7,935,233, or over 37 per cent., in the total of securities held, occurring principally in those classed as railway and other bonds, debentures and stocks. In view of the extent to which we have been, and are still likely to be, called upon to assist in the various measures taken to finance the war, it seemed wise to take every reasonable opportunity of realizing upon our holdings of securities. Total assets show an increase of \$5,057,441, which may be considered very satisfactory growth under the conditions which have prevailed.

TURNOVER OF \$15,000,000,000.

Our records show that on the average we handle every dollar of our assets over 60 times a year, so that the figures at which they stand indicate a turnover of 15 billions of dollars during the year. In return for the immense labor and heavy responsibility involved in handling this huge sum, we have earned slightly more than one-and-a-half cents on every hundred dollars.

As indicated in our remarks on the figures of the balance sheet, we have joined with the other banks in subscribing for our proportion of the \$25,000,000 of the Canadian 5 per cent. War Loan, taken by the banks in order to ensure the success of the issue. The exact amount of our subscription was \$3,426,000, and in this connection I am sure that the success of our able Finance Minister, Sir Thomas White, in obtaining through this domestic loan the sum of \$100,000,000, or twice the sum asked for, must be a source of pride to every Canadian. The loan marks a notable turning-point in the economic history of Canada.

In addition this Bank has participated in the various British war loans and other measures adopted to finance the war, and has subscribed \$250,000 to the French 5 per cent. War Loan just floated. We also placed at the disposal of our Italian Allies the facilities of this Bank and its Branches, for the purpose of accepting any subscriptions which Italian residents in Canada might desire to make to the 5 per cent. War Loan of their native country. Nor do these various contributions constitute the whole of our share of the financial burden of the war. Of the special taxation imposed by the Dominion Government as a result of the war, our share has so far amounted to over \$160,000, apart altogether from additional real estate and other taxes imposed for the same purpose, the amount of which is not readily arrived at.

THE BANK'S TAXATION.

There is an impression abroad which appears to exist even among many who should be better informed, that the banks do not bear their just share of taxation. During the year we paid in taxes, Dominion, Provincial and Municipal, over 27 per cent. of our net profits, or, to make the statement in a more concrete form, inclusive of the special war taxes, we paid no less than six hundred and fifty thousand dollars in taxes. These figures surely show that this Bank bears at least its fair share of taxation; probably there are not many other businesses in which the proportion of taxes to net income is so high.

OFFICERS ON MILITARY DUTY.

The members of the staff number 2,805, made up as follows—

Officers	2,187
Stenographers	407
Messengers	234

2,828

in addition to which we have 369 janitors, making a total of 3,197 persons permanently employed by the Bank. The number of officers who have taken up military duty at November 30th was 671, representing 24 per cent. of our staff, 27 per cent. of our male staff, and over 31 per cent. of those of military age, that is, from 18 to 45 years of age. We have seen the actual figures in connection with only a few of the other banks and corporations, but we have yet to learn of anything which approaches the sacrifice which we have been called upon to make either in extent or in the proportion of the figures. We have made many sacrifices in order to allow officers to take up military duty without delay and have placed no restrictions in the way of their doing so, although this policy has resulted in our losing the services of those officers whose special training made it difficult for us to replace them.

Twenty-five of our officers have already laid down their lives on the battlefield and a further 50 to 60 have appeared in the casualty lists. When the war is over it is our intention to erect a suitable tablet or some other form of permanent memorial to these brave and loyal young men. We have already communicated with the families of those who have laid down their lives, and it only remains to express in a general way our regret at their loss and our appreciation of the fact that the members of the staff of this Bank are made of such stuff that they can be counted upon to do their duty no matter in what form that duty may be presented to them.

We have recently taken the forward step in issuing a Monthly Commercial Letter dealing with conditions of trade and commerce at home and abroad and pointing out when possible the bearing of current events on the business outlook. The first number was issued last month, and as it is prepared by competent authorities we commend it to the careful perusal of those into whose hands it may come. We shall be glad to send it on application to any one whose name is not now on our mailing list.

We also desire to draw attention to the very copious and authentic portrayal of the conditions which have prevailed in the various parts of Canada, Great Britain and in the foreign countries where this Bank does business, which is given in the Review of Business Conditions for 1915, of which copies have been distributed to you. The various parts of this Review will be found worthy of careful study.

OPTIMISTIC ON FUTURE.

With regard to the future our view on the whole cannot be but optimistic. Thanks to the ability of our public men to cope with an unprecedented situation and the determination of our people to effect personal and public economies we have been able to bring about a most amazing adjustment from the prosperous enjoyment of an abounding flow of borrowed capital to a condition of severe trade contraction. Our harvests have been bountiful, our cultivated acreage has been increased and our factories have been entrusted with large contracts for army equipment, munitions and foodstuffs. While this terrible war must bring us much anguish and sorrow, it is clear that in proportion to her population no country will benefit economically to a greater degree than Canada.

THE LATE GENERAL MANAGER.

I cannot close these remarks without referring to my predecessor, Mr. Laird. Since his untimely death we have received numberless testimonies not only to the high esteem in which his business talents were held, but also to that strong note of personal affection which his human qualities evoked in all those who knew him. Fully charged though his mind was with other matters appertaining to the interests of the Bank, the subject of the staff was always uppermost in his thoughts and he was ever the first to evidence gratification in their success, sympathy in their misfortunes and leniency towards their shortcomings. In him the Bank has lost a staunch and fearless leader and the staff, particularly, a great and good friend.

TRADE ENQUIRIES

These enquiries come into our hands from various sources. The Weekly Bulletin of the Department of Trade and Commerce, from which the enquiries indicated in the sub-heading allotted to them are taken, should be read regularly by those interested in foreign trade. It will be sent free on application to the Department at Ottawa.

DOMESTIC TRADE ENQUIRIES.

337. **Dynamos.**—A party in British Columbia wishes to get in touch with manufacturers of small dynamos suitable for charging accumulators.
338. **Mica.**—A Toronto firm is desirous of getting in touch with Canadian producers of mica.
339. **Slack Cooperage.**—A Hamilton manufacturer wishes to obtain supplies of slack barrels and cooperage.
340. **Knitting Yarn.**—A party in Saskatchewan wants to communicate with firms having yarn at their disposal.
341. **Electrical Gauge.**—A party in Manitoba would like to hear from companies interested in assisting him to put on the market a small electrical gauge for showing the amount of liquid in a tank.
342. **Cheese Factory Machinery.**—The secretary of a farmers' organization in Saskatchewan would like to obtain prices and information as to the cost of operation, etc., from manufacturers of cheese factory machinery.
343. **Leaded Sash.**—An official in Saskatchewan would like to be put in communication with manufacturers of wooden window sash in which lead is used instead of putty.
344. **Oleic Acid.**—An Ontario manufacturer desires to obtain supplies of a commercial grade of Oleic Acid.
345. **Small Bone Articles.**—A large stationery and fancy goods house would like to hear from manufacturers of small bone articles such as buttons, etc.
346. **Cotton Yarns.**—A Central Ontario manufacturer would like to get in touch with firms having at their disposal 2-ply cotton yarns, both colored and white.
347. **Feather Machinery.**—A Montreal firm desires to get a machine for crushing feathers and a machine for steaming or dyeing feathers.
348. **Gelatine.**—We have an enquiry from Quebec for manufacturers of gelatine.
349. **Lead Foil.**—Supplies of this material for the manufacture of caps for explosives are desired.
350. **Embossing Dies.**—A Quebec furniture manufacturer would like to get into communication with firms capable of supplying embossing dies for chair backs.
351. **Corrugated Bottle Wrappers.**—Supplies of these are in demand by a large Toronto house.
352. **Ready Cut Lumber.**—A party in Ottawa would like to hear from manufacturers who are able to supply ready cut material for houses, bungalows, etc.
353. **Electric Warp.**—A Galt firm would like to hear from manufacturers of elastic warp such as is used to make elastic webbing.
354. **Two-Cylinder Vertical Engine.**—A Western firm desires to learn of manufacturers of the above type of vertical cylinder engine suitable for tractor purposes.
355. **Twine Making Machine.**—A party in Quebec is looking for a small hand machine which will make twine of different sizes.
356. **Ground Cork.**—A shoe manufacturing company would like to obtain supplies of ground cork.

IMPORT TRADE ENQUIRIES.

357. **Ivory Nuts.**—A Halifax firm is able to put manufacturers who use ivory nuts in touch with a good source of supply.
358. **Glazed Cotton Yarns.**—A manufacturing company would like to obtain supplies of glazed cotton yarns suitable for the manufacture of shoe laces.
359. **Nut Galls and Tumeric.**—A tanning and fur dressing company would like to get in touch with people able to supply the above named materials.

EXPORT TRADE ENQUIRIES.

360. **Evaporated Milk.**—A forwarding house would like to hear from a manufacturer in a position to export evaporated milk to South Africa.
361. **Household Hardware.**—We can put manufacturers in touch with a reliable firm in Australia who are desirous of representing Canadian firms producing utensils and other articles of household hardware.
362. **Piano Wire.**—We have a New York enquiry for this material.
363. **Carbide.**—We have a New Zealand enquiry for 100-ton lots of calcium carbide delivered c.i.f New Zealand ports.
364. **Injectors.**—We can put manufacturers in touch with a house in New Zealand desirous of obtaining supplies of injectors as used on Canadian railways.
365. **Canvas.**—Double and single 36 inch wide, 18 oz. weight, suitable for use in making railway wagon tarpaulins. The same New Zealand house is concerned as in the above enquiry.
366. **Agency.**—An agent in Medellin, Colombia, South America, is desirous of forming connections with Canadian manufacturers of hardware, leather, drugs, hats, cotton and woollen goods. The agent referred to is an Englishman claiming twelve years' experience in that part of South America.

THE DOMINION BANK

At the Forty-fifth Annual General Meeting of the Shareholders of The Dominion Bank, held at the Head Office in Toronto, on 26th January, 1916, the following statement of the affairs of the Bank, as at 31st December, 1915, was submitted:

PROFIT AND LOSS ACCOUNT

Balance of Profit and Loss Account, 31st December, 1914.....	\$284,316 59
Profits for the year, after deducting charges of management and mak- ing full provision for bad and doubtful debts.....	\$870,966 47
Less	
Dominion Government War Tax	\$43,618 35
Taxes paid to Provincial Governments	22,225 00
	<u>65,843 35</u>
Making net profits of.....	805,123 12
	<u>\$1,089,439 71</u>

Which amount has been disposed of as follows:

Dividends (quarterly) at Twelve per cent. per annum.....	\$720,000 00
Contribution to Officers' Pension Fund	25,000 00
Balance carried forward.....	344,439 71
	<u>\$1,089,439 71</u>

E. B. OSLER,
President.

C. A. BOGERT,
General Manager.

GENERAL STATEMENT

LIABILITIES

Capital Stock paid in.....	\$6,000,000 00
Reserve Fund	\$7,000,000 00
Balance of Profits carried for- ward	344,439 71
Dividend No. 133, payable 3rd January, 1916	180,000 00
Former Dividends unclaimed..	1,049 75
	<u>7,525,489 46</u>
Total Liabilities to the Shareholders.....	\$13,525,489 46
Notes in Circulation.....	\$4,995,666 00
Deposits not bear- ing interest	\$12,604,373 24
Deposits bearing interest, includ- ing interest ac- crued to date..	53,361,224 75
	<u>65,965,597 99</u>

Balances due to other Banks in Canada	\$579,855 02
Balances due to Banks and Banking Correspondents in the United Kingdom and for- eign countries	878,361 55
Bills Payable	47,352 00
Acceptances under Letters of Credit	1,215,563 49
Liabilities not included in the foregoing	267,241 40
Total Liabilities to the Public.	<u>\$73,949,637 45</u>
	<u><u>\$87,475,126 91</u></u>

ASSETS

Gold and Silver Coin.....	\$1,626,964 01
Dominion Government Notes...	11,041,905 50
Notes of other Banks.....	704,778 65
Cheques on other Banks.....	3,721,594 35
Balances due by Banks and Banking Correspondents else- where than in Canada.....	2,829,383 17
	<u>\$19,924,625 68</u>

Dominion and Provincial Gov- ernment Securities, not ex- ceeding market value.....	755,150 69
Canadian Municipal Securities, and British, Foreign and Col- onial Public Securities other than Canadian, not exceeding market value	1,167,263 29
Railway and other Bonds, De- bentures and Stocks, not ex- ceeding market value	4,647,001 59
Call and Short (not exceeding thirty days) Loans in Canada on Bonds, Debentures and Stocks	5,944,900 13
Call and Short (not exceeding thirty days) Loans elsewhere than in Canada.....	221,459 58
	<u>\$32,660,400 96</u>

THE DOMINION BANK—Continued

ASSETS.—CONTINUED.

Other Current Loans and Discounts in Canada (less rebate of interest)	\$47,453,931 23
Other Current Loans and Discounts elsewhere than in Canada (less rebate of interest) .	12,329 18
Liabilities of Customers under Letters of Credit, as per contra	1,215,563 49
Real Estate other than Bank Premises	18,414 74
Overdue Debts (estimated loss provided for)	228,361 30
Bank Premises, at not more than cost, less amounts written off	5,616,009 71
Deposit with the Minister of Finance for the purposes of the Circulation Fund	263,900 00
Mortgages on Real Estate sold..	6,216 30
	<hr/> \$54,814,725 95
	<hr/> \$87,475,126 91
E. B. OSLER,	C. A. BOGERT,
President.	General Manager.

AUDITORS' REPORT TO SHAREHOLDERS.

We have compared the above Balance Sheet with the books and accounts at the Chief Office of The Dominion Bank, and with the certified returns received from its Branches, and after checking the cash and verifying the securities at the Chief Office and certain of the principal Branches on December 31st, 1915, we certify that, in our opinion, such Balance Sheet exhibits a true and correct view of the state of the Bank's affairs, according to the best of our information, the explanations given to us and as shown by the books of the Bank.

In addition to the examinations mentioned, the cash and securities at the Chief Office and certain of the principal Branches were checked and verified by us at another time during the year and found to be in accord with the books of the Bank.

All information and explanations required have been given to us and all transactions of the Bank which have come under our notice have, in our opinion, been within the powers of the Bank.

G. T. CLARKSON } of Clarkson, Gordon & Dilworth, C.A.
R. J. DILWORTH }

Toronto, January 18th, 1916.

367. **Nickel-plated Cutlery.**—We have an enquiry for large supplies of cutlery quotations to be made c.i.f. Liverpool.

368. **Tin and Iron Cutlery.**—We have an enquiry for large supplies of tin and iron cutlery, quotations to be made c.i.f. Liverpool.

369. **Agency.**—An English specialty firm, claiming to have a large distribution among grocers, chemists, etc., in Great Britain and Ireland, is open to negotiate with a firm having a suitable line to offer for sale on a sole agency basis.

370. **Household and Druggists' Glassware.**—We have an English enquiry for the above-named commodities.

371. **Corrundum and Other Abrasive Materials.**—An English firm enquires for producers of all kinds of abrasive materials.

372. **Pulp and Paper.**—A French agent in Lyon would like to hear from manufacturers wishing to dispose of some of their products in France.

373. **Chemicals.**—A Vancouver export house would like to hear from manufacturers wishing to enter the Oriental market, as they believe they could handle the matter economically.

374. **Double Geared Windmills.**—A recommended agent in South Africa would like to obtain the agency for that country for a double geared windmill made by a Canadian manufacturer.

EXPORT TRADE ENQUIRIES TAKEN FROM THE WEEKLY BULLETIN OF THE DEPARTMENT OF TRADE AND COMMERCE.

375. **Hardwood Benders.**—An important departmental store in London desires to receive hardwood boards 8 inches wide and $\frac{5}{8}$ inch thick, bent as sketch, which can be obtained from the Department of Trade and Commerce.

376. **Broom Handles.**—A firm of timber importers at Manchester wishes to be placed in touch immediately with Canadian exporters of broom handles of the following sizes: 50-inch x $1\frac{1}{2}$ -inch, 50-inch x 1 1-16-inch; white spruce or red pine.

377. **Corrugated Paper.**—A very large firm in Glasgow is anxious to obtain a supply of corrugated paper made in rolls 250 feet long by 26 inches deep. Sample is in possession of the Department of Trade and Commerce, Ottawa.

378. **Box Shooks, Broom Handles, Washboards.**—A large importing house in Glasgow would like to receive quotations c.i.f. Glasgow for the above.

379. **Forgings.**—A Rugby firm would like to hear from manufacturers in a position to supply large forgings to specification.

380. **Forgings.**—A Birmingham firm enquires for best quality forgings.

381. **Underwear, Cloth and Boots.**—A London firm engaged in export, whose travellers cover Russia, India, Egypt and the Levant, and South America, is desirous of arrang-

UNION BANK

OF CANADA

FIFTY-FIRST ANNUAL STATEMENT

30th November, 1915

PROFIT AND LOSS ACCOUNT

Balance at credit of account, 30th November, 1914	\$103,019 51
Net profits, for the year, after deducting expenses of management, interest due depositors, reserving for interest and exchange, and making provision for bad and doubtful debts and for rebate on bills under discount, have amounted to	659,688 01
	<u>\$762,707 52</u>

Which has been applied as follows:—

Dividend No. 112, 2 per cent., paid 1st March, 1915	\$100,000 00
Dividend No. 113, 2 per cent., paid 1st June, 1915	100,000 00
Dividend No. 114, 2 per cent., paid 1st September, 1915	100,000 00
Dividend No. 115, 2 per cent., paid 1st December, 1915	100,000 00
Bonus of 1 per cent., payable 1st March, 1916, to shareholders of record as on 14th February, 1916	50,000 00
Transferred to Contingent Account	150,000 00
Contribution to Officers' Pension Fund	10,000 00
War Tax on Bank Note Circulation to 30th November, 1915....	45,730 77
Balance of Profits carried forward	<u>106,976 75</u>

\$762,707 52

GENERAL STATEMENT

Fifty-First Annual Balance Sheet, 30th November, 1915

LIABILITIES

Capital Stock	\$5,000,000 00
Rest Account	\$3,400,000 00
Balance of Profit and Loss Account carried forward	106,976 75
	<u>3,506,976 75</u>
Unclaimed Dividends	4,716 28
Dividend No. 115	100,000 00
Bonus payable 1st March, 1916, to Shareholders of record as on 14th February, 1916	50,000 00
	<u>3,661,693 03</u>
Notes of the Bank in circulation	7,673,659 00
Deposits not bearing interest	21,999,832 00
Deposits bearing interest	50,685,304 63
Balances due by other Banks in Canada	205,629 00
Balances due to Banks and Banking Correspondents elsewhere than in Canada	984,405 99
Bills payable	105,196 13
	<u>\$1,654,026 75</u>
Acceptances under Letters of Credit	343,585 45
Liabilities not included in the foregoing	3,758 47
	<u>\$90,663,063 70</u>

ASSETS.

Gold and Silver Coin	1,481,583 56
Dominion Government Notes	7,775,511 00
	<u>\$9,257,094 56</u>
Deposit with the Minister of Finance for the purposes of the Circulation Fund	260,000 00
Deposit in the Central Gold Reserves	2,800,000 00
Notes of other Banks	706,742 00
Cheques on other Banks	3,556,491 45
Balances due by other Banks in Canada	79,286 08
Balances due by Banks and Banking Correspondents elsewhere than in Canada	6,033,345 88
Dominion and Provincial Government Securities not exceeding market value	685,707 50
Canadian Municipal Securities, and British, Foreign and Colonial Public Securities other than Canadian	395,349 98
Railway and other Bonds, Debentures and Stocks not exceeding market value	3,434,139 73
Call and Short (not exceeding 30 days) Loans in Canada on Bonds, Debentures and Stocks	7,746,570 44
Call and Short (not exceeding 30 days) Loans elsewhere than in Canada	4,183,657 69
	<u>\$39,138,385 31</u>
Other Current Loans and Discounts in Canada (less rebate of interest)	\$48,941,315 32
Other Current Loans and Discounts elsewhere than in Canada (less rebate of interest) ..	608,602 92
Liabilities of customers under Letters of Credit, as per contra	343,585 45
Real Estate other than Bank Premises	234,877 96
Mortgages on Real Estate sold by the Bank	109,379 14
Overdue Debts, estimated loss provided for	220,466 67
Bank Premises, at not more than cost, less amounts written off	1,057,443 22
Other Assets not included in the foregoing	9,007 71
	<u>\$90,663,063 70</u>

JOHN GALT, President.
G. H. BALFOUR, General Manager.

REPORT OF THE AUDITORS TO THE SHAREHOLDERS OF THE UNION BANK OF CANADA.

In accordance with the provisions of sub-sections 19 and 20 of Section 56 of the Bank Act, we report to the Shareholders as follows:
We have audited the above Balance Sheet with the books and vouchers at Head Office and with the certified returns from the branches.

We have obtained all the information and explanations that we have required, and are of the opinion that the transactions of the Bank which have come under our notice have been within the powers of the Bank.

In addition to our verification at the 30th November, we have, during the year, checked the cash and verified the securities representing the investments of the Bank at its chief office and principal branches and found them to be in agreement with the entries in the books of the Bank relating thereto.

In our opinion the Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the affairs of the Bank, according to the best of our information and the explanations given to us, and as shown by the books of the Bank.

T. HARRY WEBB, E. S. READ, C. R. HEGAN, Auditors.
of the firm of WEBB, READ, HEGAN, CALLINGHAM & CO., Chartered Accountants.

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BANK OF HAMILTON

44th ANNUAL STATEMENT

PROFIT AND LOSS ACCOUNT.

Balance at Credit of Profit and Loss Account, 30th Nov., 1914	\$ 157,087.62
Transferred from Reserve Fund	300,000.00
Profits for the year ended 30th November, 1915, after deducting charges of management, interest accrued on deposits, rebate on current discounts, and making provision for bad and doubtful debts	424,274.05
	<u>\$ 881,361.67</u>
Appropriated as follows:	
Four quarterly dividends, in all 12%....	\$360,000.00
Pension Fund, Annual Assessment \$9,013.68	
Special Contribution	10,000.00
	<u>19,013.68</u>
War Tax on Bank Note Circulation.....	26,526.46
Provision for Depreciation in Securities held for Debts and for Contingencies	300,000.00
	<u>705,540.14</u>
Balance of Profits carried forward	<u>\$175,821.53</u>

GENERAL STATEMENT. LIABILITIES.

To the Public:	
Notes of the Bank in Circulation	\$ 3,489,830.00
Deposits not bearing interest,	\$8,302,395.73
Deposits bearing interest, including interest accrued to date of Statement. 29,767,568.88	
	<u>38,069,964.61</u>
Balances due to other Banks in Canada	6,158.23
Balances due to Banks and Banking Correspondents elsewhere than in Canada and the United Kingdom	65,551.30
Acceptances under Letters of Credit	57,175.43
	<u>\$ 41,688,679.57</u>
To the Shareholders:	
Capital stock paid in	3,000,000.00
Reserve Fund	\$3,300,000.00
Balance of Profits carried forward	175,821.53
	<u>\$3,475,821.53</u>
Dividend No. 106, payable 1st Dec., 1915	90,000.00
Former Dividends unclaimed	318.50
	<u>3,566,140.03</u>
	<u>\$48,254,819.60</u>

JOHN S. HENDRIE, President.

ASSETS.

Current Coin	\$ 799,790.92
Dominion Government Notes	5,839,896.00
	<u>\$6,639,686.92</u>
Deposit in the Central Gold Reserves..	400,000.00
Deposit with the Minister of Finance for the purposes of the Circulation Fund	155,000.00
Notes of other Banks	281,220.00
Cheques on other Banks.....	2,053,582.31
Balances due by other Banks in Canada	340,813.54
Balances due by Banks and Banking Correspondents elsewhere than in Canada	954,031.29
	<u>\$10,824,334.06</u>
Dominion and Provincial Government Securities, not exceeding market value	342,172.54
Canadian Municipal Securities, and British, Foreign, and Colonial Public Securities, other than Canadian	3,170,740.28
Railway and other Bonds, Debentures and Stocks, not exceeding market value	580,101.88
Call and short loans (not exceeding thirty days) in Canada, on Bonds, Debentures and Stocks	2,216,850.69
	<u>\$17,134,199.45</u>
Other Current Loans and Discounts in Canada (less rebate of interest)....	28,119,125.74
Real Estate other than Bank Premises	346,697.30
Overdue debts, estimated loss provided for Bank premises, at not more than cost, less amounts written off.....	149,392.94
	<u>2,101,220.53</u>
Other assets not included in the foregoing	347,008.21
Liabilities of customers under Letters of Credit as per contra	57,175.43
	<u>\$48,254,819.60</u>

J. P. BELL, General Manager.

AUDITORS' REPORT.—In accordance with the provisions of Sub-sections 19 and 20 of Section 56 of the Bank Act, we report to the Shareholders as follows:—

We have examined the above Balance Sheet with the books and vouchers at Head Office and with the certified returns from the branches, and we have obtained all the information and explanations we have required, and in our opinion the transactions which have come under our notice have been within the powers of the Bank.

We have checked the Cash and verified the Securities of the Bank at the Chief Office and at several of the principal branches during the current year, as well as on November 30th, 1915, and have found that they agreed with the entries in the books of the Bank with regard thereto. In our opinion the balance sheet is properly drawn up so as to exhibit a true and correct view of the state of the Bank's affairs according to the best of our information and the explanations given to us, and as shown by the books of the Bank.

C. S. SCOTT, }
E. S. READ, } Auditors.
Chartered Accountants.

ing the agencies, upon a purchasing outright basis, of Canadian manufacturers of underwear (balbriggan, lisle thread and lightweight wool), cloth (cheviot, fancy tweed, Venetian), and men's boots.

382. Electric Pocket Lamps and Torches, and also Electric Pipe Lighters.—A London company seeks supplies of electric pocket lamps and torches, and also of electric pipe lighters, and wishes to get into touch with Canadian manufacturers in a position to supply these specialties.

383. Brushes, Woodenware, Cutlery, etc.—A firm in London, England, enquires for the names of Canadian houses in a position to supply the following articles: Woodenware suitable for brushes and household purposes, cutlery of every description, brushes, surgical instruments

and appliances, surgical glassware and chinaware, enamelware, etc.

384. Woodenware.—A London company which usually purchases supplies from the United States, is open to receive offers from Canadian manufacturers of pastry boards, meat boards, sleeve boards, folding clothes racks, clothes pins, spring clothes clips.

385. Wood-pulp Boards and Straw Boards.—A Manchester firm, doing a home and export trade, is in the market for supplies of wood-pulp boards and straw boards. They are open to buy in large quantities. Samples of the wood-pulp boards desired can be inspected at the Department of Trade and Commerce, Ottawa.

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Walls, white or covered with foliage paper, with blue or grey predominating; woodwork white; rugs, plain dark blue centre with floral border; hangings dark blue; pictures, eighteenth century sporting prints or reproductions of Gainsborough, Reynolds or Romney.

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By the Toronto Furniture Co., Limited

"MANY A THING DIVINELY DONE BY CHIPPENDALE AND SHERATON."—Andrew Lang.

OF ALL furniture, that made by Chippendale is surely the most beautiful and practical. Beautiful because of its delicate carving, graceful curves, perfect proportions and soft, deep-toned coloring; practical because in everything pertaining to design, Chippendale subordinated all other elements to that of structural stability. ¶ In our replicas of Chippendale furniture, we have reproduced with fine sympathetic feeling and admirable skill the beautiful decorations, simple chaste lines, perfect proportions, and clear luminous finish that make the originals so delightful. ¶ The very simplicity which you admire in this Chippendale suite enables us to produce it at a price at least no higher than that demanded for ordinary furniture, lacking its distinction of style and finish. We invite you to view this and other notable periods in our line at the leading dealers in your locality.

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Sideboard—25 in. x 66 in. Has five drawers and three velvet-lined trays for table silver. May be had with or without mirror back. All drawers have dust-proof bottoms. *Table*—54 in., 8 or 10 ft. extension. *China Cabinet*—May be had with or without drawers. *Serving Table*—22 in. x 43 in. *Chairs*—Upholstered in leather or tapestry. *Wood*—Mexican mahogany, finished in antique, rubbed to a dull egg-shell gloss.



Look for the Shop Mark inside the drawer.

*Made in
Canada
\$85 and up.*



*Cuts
Down
Overhead*

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THOUSANDS of manufacturers have told us at one time or another that they prefer the International "Dial" type of Time Recorder, as pictured above, to all others. Recently we made an exhaustive enquiry as to their reasons, and we publish them below, believing they will interest you.

1. The operation of the employee recording his time on the Dial is the fastest in the world.
2. The time slips taken from the Dial Recorder at the end of the pay period give the pay-roll in complete form, already made up, and easily filed.
3. No employee has an opportunity of losing or mislaying the Dial's Record, as it is kept under lock and key during the whole pay period.
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5. One employee cannot see the record of another.
6. The slips from the Dial Recorder can be referred to months back, being easily filed or pasted in a book.
7. The mechanism of the Dial Recorder is inaccessible to those of meddlesome mind.
8. The necessary stationery for the Dial costs less than any other Time Recorder—less up-keep expense.
9. The Dial Recorder is clean and sanitary to use and the printed sheet cannot be thumbed and soiled by workmen's hands as with cards.
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"Now the work starts on time because the employees are not allowed to 'ring in' until actually ready for work. This device stopped a rather serious leak in my pay-roll, one which was steadily growing worse."

Mr. Labor-buyer — you may not have thought of this idea. Isn't it a good one? We have many such suggestions awaiting you if you will ask us to make a report on your Wage-Keeping and Cost-Keeping Systems. We have made a life-long study of these important items in overhead expense and are conversant with the latest and best methods in all kinds of plants all over the world.

Asking for our advice costs you nothing and commits you to nothing.

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THE METAL PAR EXCELLENCE FOR CUTTING
STEEL AND CAST IRON AT HIGH SPEEDS

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The Advantage of the Stellite tool is twofold. First, it will do from 20 to 100 per cent. more work in a given time than a steel tool of the same dimensions, working under the same conditions. It takes bigger cuts at a higher speed than any tool steel; second, it does not require so much grinding, and thus utilizes the time of the operator at the machine instead of at the emery wheel.

The Reason the Stellite tool cuts so much faster than steel is because the Stellite tool is able to cut continuously at a much higher temperature than any steel tool; it will not burn, and the temper stays in the tool. Sometimes the speed of a lathe becomes so great that the edge of the Stellite tool will become visibly red, and remain so during an entire cut without the slightest injury.

Stellite is to the best high-speed steel what high-speed steel is to ordinary steel.

Costs more at the beginning, but is by far the cheapest and most profitable in the end.

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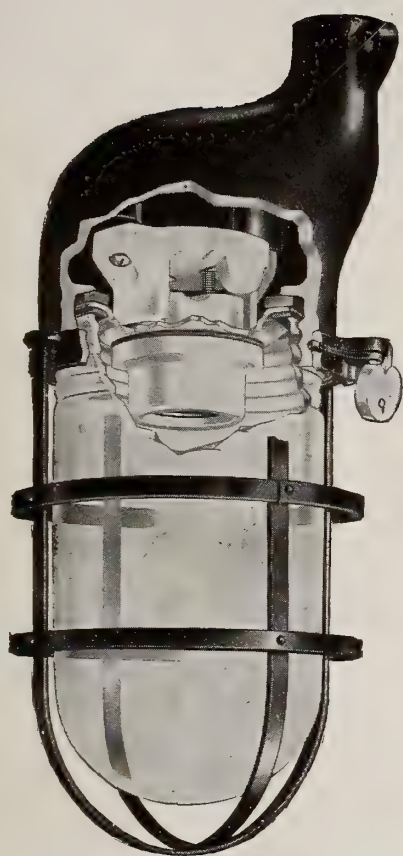
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WINNIPEG
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ST. JOHN, N.B.
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HAMILTON
SASKATOON

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Broken-away View, showing Interior

CONDULETS

OF

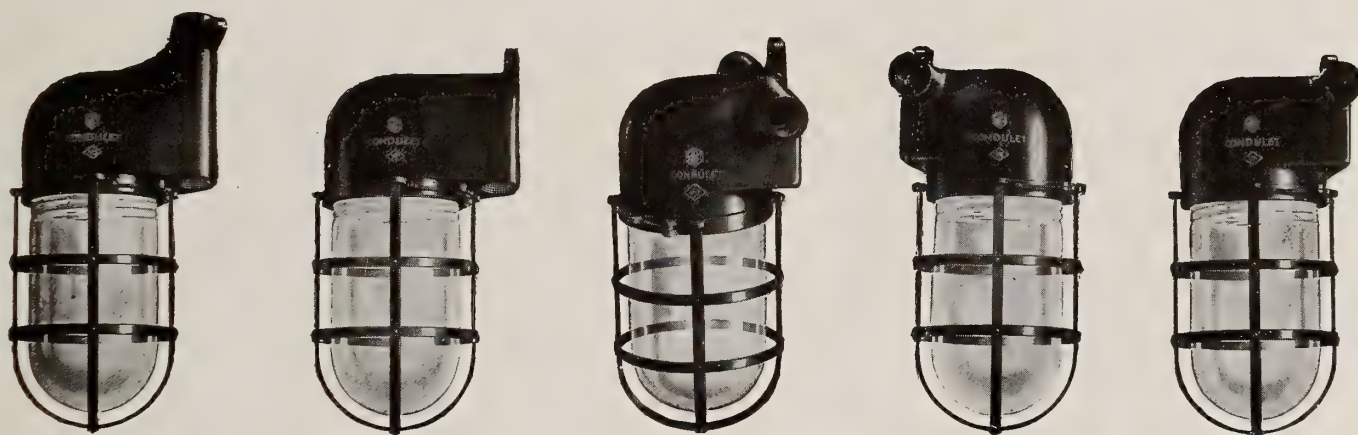
V and VH Series

VAPOR, GAS AND DUST PROOF

For marine work and in breweries, refineries, flour mills or wherever there is dampness, gas or fine dust.

These Condulets remain vapor, gas and dust proof even though globes be broken or removed for lamp renewals.

Illustrations below show a few of the many forms in which these series of Condulets are made.



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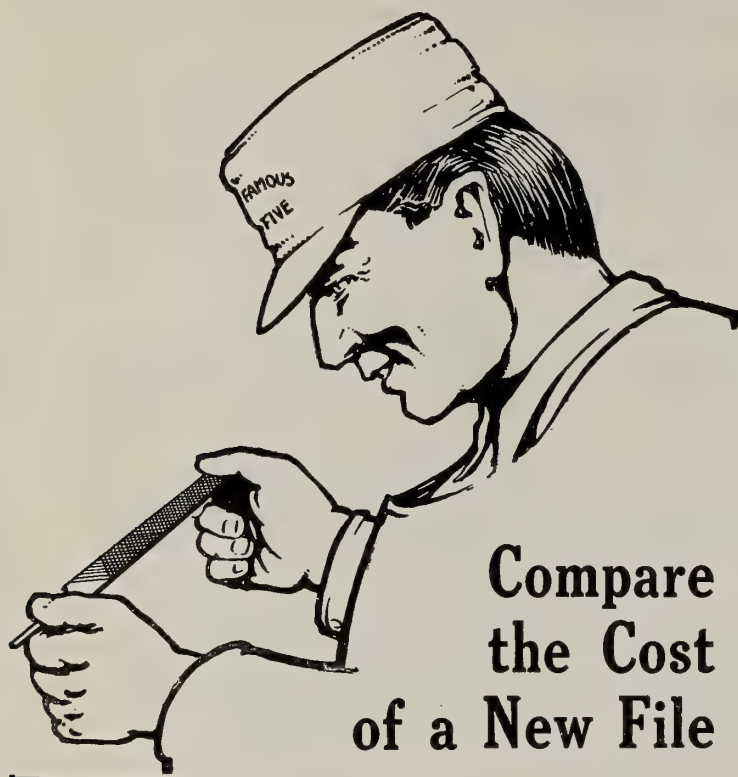
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with the time your men are wasting using a file when it is half worn.

It won't take long for you to figure out that the cost of a new file is negligible in comparison to the time saved in labor.

Teach your men to throw away their files when they are half worn, and replace them with the files favored by 90% of Canada's file users.

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Great Western
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They are the product of 50 years' experience in file making, and are as uniform as the most scientific knowledge and up-to-date machinery can make them.

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NICHOLSON FILE COMPANY
Port Hope (Dealers everywhere) Ontario

AMONG THE INDUSTRIES

Under this heading are published items of news of current interest concerning the activities of Canadian manufacturers. Information about changes of interest, enlargement of plants, and plans for future developments are always welcome, and are published free of charge, provided they should not be properly classified as advertisements.

*Items prefixed with an asterisk are based on official information received in each case from the companies mentioned. Other items, while secured usually from reliable sources, have not the same authoritative origin.

ALBERTA.

Medicine Hat.

It is the intention of the Lake of the Woods Milling Company to install new equipment in the power plant at the mill here.

Redcliff.

The Redcliff Rolling Mills are extending their plant and installing machinery for making bolts and nuts.

The Dominion Glass Company will make an extension and install a plant for making lamp glasses.

BRITISH COLUMBIA.

Sidney.

The Canada Potash & Algin Company, Limited, is establishing a plant here. This company controls in Canada the Mohler processes for the treatment of kelp, or sea weed, which is particularly plentiful all along the Pacific coast.

NEW BRUNSWICK.

Sackville.

*The shoe and moccasin factories of A. E. Wry-Standard, Limited, with their contents, were completely destroyed by fire on the night of January 9. Fortunately, owing to the fact that the company is an amalgamation of two industries, viz., A. E. Wry, Limited, and Standard Manufacturing Co., spare buildings were available which were at once equipped and operations resumed about the end of the month. An entirely new equipment of machinery for both factories has been ordered.

MANITOBA.

Winnipeg.

*The Munro Steel & Wire Works, Limited, have merged their business with that of the Hero Mfg. Co., Limited, and the combined concerns, known as the Munro-Hero Manufacturing Co., Limited, have increased their capital to \$100,000. The merger gives increased manufacturing advantages. The new company is now located at 357 Johnson Avenue, Elmwood, where they have excellent shipping facilities. They manufacture fanning mills, washing machines, spring beds, wire fencing, wire work, etc.

NOVA SCOTIA.

Dartmouth.

The Maritime Bridge Company, New Glasgow, N.S., has been awarded the contract for steel required in the erection of a plant for the Williston Steel & Foundry Company, and the Starr Manufacturing Company, Dartmouth, N.S., for engines.



To Power Users

Have you figured on the REDUCED HYDRO RATES?

They are NOW IN FORCE.

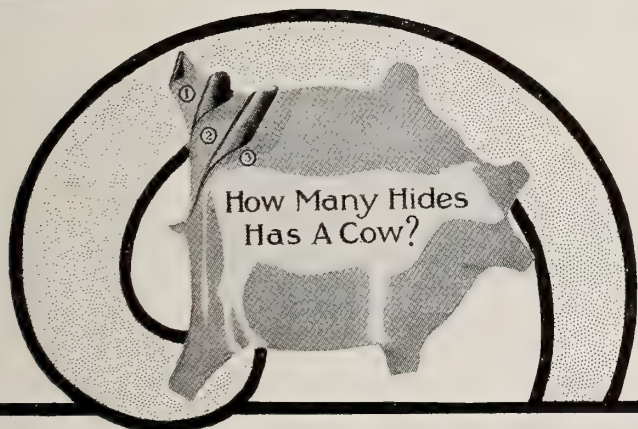
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Phone Adel. 2120



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ADDRESS DEPARTMENT 453

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When writing advertisers, please mention INDUSTRIAL CANADA.

*W. H. Covert, representing the French Cable Company, which proposes to locate on the north end harbor front, has applied to the town council for exemption from taxation for a period of fifteen years on wharves and buildings which the company proposes to build.

ONTARIO.

Brampton.

It is reported that Gummed Papers, Limited, which began operations here two years ago, has increased the capacity of its plant by about 50 per cent., having added to its output cloth lined paper, waterproof papers, printed paper tape and cloth tape.

Chatham.

Three industrial by-laws carried by large majorities. These grant fixed assessments to the Gray-Dort Motor Company, American Well Works Company and the Dominion Sugar Company, and to the last named a bonus of \$18,500 toward the purchase of a site.

Collingwood.

An addition costing \$35,000 will be made to the mill of Wilson Bros.

Durham.

Some additional machinery may be required by the National Portland Cement Company, Limited, as they are contemplating changing their process from the marl system to the rock system.

Guelph.

It is reported that W. A. Mahony, Telephone Building, will shortly call for tenders on the erection of a stove factory. The site is not yet decided on.

Hamilton.

Contract for the erection of an addition to the factory of the Burlington Steel Company has been awarded to the H. G. Christman Company, Bank of Hamilton Building.

The contract for carpentry required in the erection of an addition to a factory for the Canadian Cartridge Company has been awarded to H. G. Christman Company, Bank of Hamilton Building.

The Hammant Steel Car Company are considering the building of an addition to their factory.

On January 18th, the E. T. Wright Company's premises were damaged by fire to the extent of \$500.

The factory formerly occupied by the Climax Road Machinery Company has been leased by the Perkins Glue Company of Lansdale, Pa., who will make extensive alterations to suit the requirements of their industry.

Hepworth.

*Ratepayers carried a by-law on January 3, authorizing a loan of \$12,000 to the Hepworth Silica Pressed Brick Co., Limited. The company intends making some minor alterations to its plant and building a large shed to cover its stock.

Kincardine.

*A by-law granting a fixed assessment of \$4,000 a year for 10 years and certain tax exemptions to the Ontario People's

Salt & Soda Co., Limited, was carried on January 3. In return the company agreed to erect one or two vacuum pans and a dairy mill for the manufacturing of dairy salt, also to pay \$10,000 a year in wages for ten years. Plans, specifications and blue prints are now being prepared for the addition, but as the winter is a busy season, construction will not commence until some time in July.

Kingston.

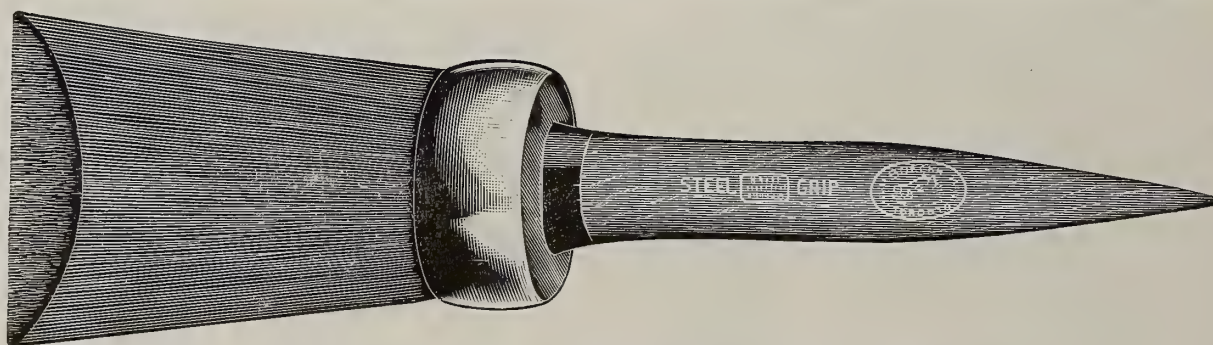
*Mr. W. C. Phillips, formerly of the Phillips Manufacturing Company, Limited, Toronto, has acquired the assets and good will of the Reliance Moulding Co., Limited, of Kingston, and in future the latter company will be known as the Frontenac Moulding & Glass Co., Limited, with headquarters at Kingston.

Kingsville.

*The plant of the Brown & Wigle Co., Limited, manufacturers of blankets and cloakings, which was closed down from March 1 to December 31, 1915, is now being fitted up and will soon resume operations at full capacity. Some good-sized orders have been secured, while at the recent municipal elections, the ratepayers of Kingsville voted the company a loan of \$10,000, repayable \$1,000 a year for ten years without interest, to provide working capital. Control of the company was secured by Mr. J. E. Brown, president and manager, last December, when he bought out the Toronto interests involved.

Leamington.

The town council propose to grant a site for three warehouses to the Rock City Tobacco Company, and have appointed a committee to purchase it. The approximate cost will be \$25,000.



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The compressed nickelled steel ferrules on all

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Only the best materials enter into their construction.

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NOTICE



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Persons having business with any of the Inspectors should communicate with them at the Parliament Bldgs., Toronto.

Phone Main 5800

HON. JAS. S. DUFF,
Minister of Agriculture.



NOTICE

**To Manufacturers, Dealers
and Users of Steam Boilers.**

All steam boilers built in, or entering the Province of Ontario, and boilers exchanged or repaired, are subject to Government Inspection as prescribed in the Steam Boilers Act, 3 George V., C. 61.

Before any work of repair or alteration is commenced on any boiler, notice must be sent to the Department stating the nature and extent of the repairs or alterations proposed to be made. If the Chief Inspector should consider such repairs or alterations of an extensive character, the boiler must be inspected in accordance with the Regulations by an Inspector authorized under the Act.

All communications should be addressed to the Steam Boiler Branch, Department of Public Works, Parliament Bldgs., Toronto.

HON. FINLEY G. MACDIARMID, **D. M. MEDCALF,**
Minister of Public Works. Chief Inspector of Steam Boilers.

NOTICE

TO STATIONARY AND HOISTING ENGINEERS

Everyone operating a STATIONARY steam plant of 50 h.p. or over in the Province of Ontario must hold a Stationary Engineer's Certificate from the Board of Stationary and Hoisting Engineers. Anyone operating such a plant without a Certificate is liable to the penalties set forth in the Stationary and Hoisting Engineers' Act.

Everyone operating a HOISTING steam plant working at a pressure of 20 pounds or over irrespective of horse power, and used for hoisting in structural operations or excavating purposes in the Province of Ontario, must hold a Hoisting Engineer's Certificate from the Board of Stationary and Hoisting Engineers. Anyone operating such a plant without a Certificate is liable to the penalties set forth in the Stationary and Hoisting Engineers' Act.

Application forms for obtaining STATIONARY or HOISTING Engineers' Certificates, may be had upon applying to the Chairman.

Hon. JAS. S. DUFF,
Minister of Agriculture.

W. C. MCGHIE,
Chairman of Board.

Lindsay.

A by-law granting certain concessions to T. Hudgson, Orillia, has been passed and a chemical plant for the manufacture of wood alcohol will be erected at an approximate cost of \$60,000.

Listowel.

The by-law was carried granting \$12,000 to a company which proposes to establish a boot factory here.

London.

*No arrangements have as yet been made for the erection of an addition to the plant of the Parnell-Dean Steam Baking Co., Limited, as reported recently. The company do not know how the rumor that they intended to build got out, but for the present they have no construction in view.

New Toronto.

*Ratepayers have passed a by-law granting a fixed assessment to the Goodyear Tire & Rubber Co. of Canada, who propose erecting a new plant here for the manufacture of tires. The company's Bowmanville plant, where between 700 and 800 people are employed, has been outgrown, and it was the intention to build a tire plant in or close to Toronto and continue to manufacture mechanical goods and some new lines in Bowmanville.

Ottawa.

The property on Wellington Street, formerly known as the Excelsior Hotel, has been purchased by the Ottawa Brass Foundry Company, and extensive improvements and alterations will be made.

*To mark the completion of an addition to their plant, which will increase the company's capacity by over 50 per cent., the Capital Wire Cloth & Mfg. Co., Limited, gave a ball in the new addition on Friday evening, January 21. The place was beautifully decorated for the occasion, and over 100 couples participated. The new premises are 30 ft. x 90 ft. in size, 2½ stories high and of brick, concrete and steel construction. They will accommodate five more wire weaving looms, now under construction. It is hoped to have the addition in full operation by the middle of February.

Owen Sound.

*The steel works built here some years ago by the Cramp Steel Co., but never operated, have been taken over by the Wm. Kennedy & Sons, Limited, manufacturers of water power plant machinery and steel castings, and will be utilized in the production of steel for ammunition and other purposes. At present the two 15-ton open hearth steel furnaces in the plant are being remodelled, and it is expected to have them in operation about March 10.

A by-law granting a loan to the Owen Sound Shoe Manufacturing Company, Limited, has been carried, and they are about to remodel the Pacific Hotel.

Pembroke.

It is reported that the Hardware Specialties, Limited will erect a factory here.

The Pembroke Iron Works have taken over the Lee Manufacturing Company, and will make stoves.

For quality and service on

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WRITE

RUDD PAPER BOX CO., Limited

372 Richmond St. West, Toronto, Canada

COTTON AND WOOL

WASTE *and*

WIPERS

Tents	Cordage
Tarpaulins	Twines
Flags	Duck
Jute and Cotton Bags	

Scythes & Company, Ltd.
MONTREAL - TORONTO

Peterborough.

The Peterborough Metal Products Company, which was formed to manufacture laundry machinery, has leased for three years, with an option of purchase at the end of the time, the old Cordage Works. Since securing the building the company has received a government contract which will keep the plant running at full capacity, and will employ between 90 and 100 hands for a full year. The company is already planning to add a forging plant. It is not expected that the plant will be ready for operation until some time in February. On January 3rd a by-law granting the company exemption from taxation was carried by the ratepayers.

The plant of the Auburn Woollen Mills is to be enlarged.

Petrolia.

By-laws were carried authorizing a loan of \$25,000 to the Western Sugar Refining Company for general purposes, and a loan of \$21,000 for construction expenses.

Port Arthur.

The Western Machinery Company will shortly move into larger premises on North Court Street, and will install a quantity of new machinery.

Renfrew.

The Renfrew Electric Mfg. Co., Limited, has increased its capital from \$50,000 to \$100,000, and has secured a Dominion charter. The extra capital is to provide for increased business, and for an addition to its factory buildings, which were put up during the late fall. Of the extra \$50,000 authorized capital only \$25,000 is being paid up or subscribed at present.

St. Catharines.

A by-law to partially exempt the factory of the new company, Chemical Refineries, Limited, for the manufacture of potash, was carried by 705 to 147.

*The intimation, which appeared in certain papers following the destruction of the local mill of the Maple Leaf Milling Co., Limited, that the company intended to rebuild the mill in Parry Sound, has no foundation in fact, and officials of the company are at a loss to understand how the report originated. A warehouse is now being erected on the site of the former mill, which it is not the company's intention to replace.

Sandwich.

A by-law has been carried granting tax exemption to the Cardwell Sand & Gravel Company, Windsor. Work will probably start shortly on the construction of a plant for the manufacture of building material, etc. The estimated cost is \$40,000.

Sarnia.

Lockwood, Green & Company, Boston, are now negotiating with a view to the erection of a factory to cost \$500,000.

Stirling.

Wallace, Chapman & Marshall, of Oakville, Ont., have been granted a bonus as the result of a by-law recently carried. This company will make cheese boxes, baskets and wood veneer work. The village will erect a factory, which will remain the property of the corporation for ten years, after which it becomes the possession of the company, providing it has been operated all the time. During the first five years the company is to be exempt from taxation except school taxes.

Thorold.

The Ontario Paper Co., Limited, will erect a sulphite mill early in the spring. Contracts for two digesters, 15 feet in diameter by 49 feet in height have been let to the Chicago Bridge & Iron Works.

Toronto.

The plant of the Martin Corrugated Paper Box Company on Pape Avenue, which was visited by a serious fire on Christmas Eve, is once more filling orders and temporary premises have been engaged.

The Canada Cycle & Motor Co., Limited, will henceforth be conducted as an organization separate from the Russell Motor Car Company. Lloyd Harris will be president, and J. W. Gibson will be general manager. The company will continue to manufacture bicycles, skates and accessories.

The three-acre site on Weston road, close to the Russell Motor Car Factory, has been purchased by the Granite Concrete Block Company and Norwalk Burial Vault Company.

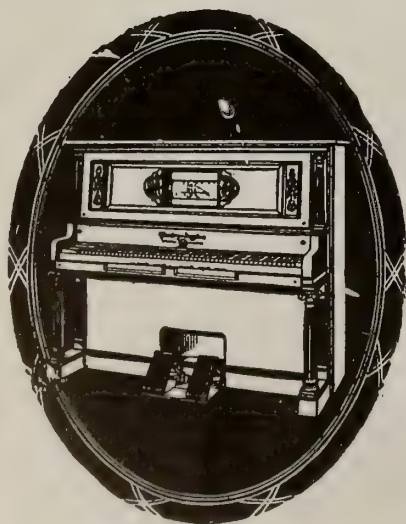
The addition which is now being built to the factory of the Canada Metal Company, Fraser Avenue, costing about \$10,000, will be of brick and steel construction.

*A permit has been issued to White & Thomas, 212 Simcoe Street, manufacturers of sheet metal products, bakers' and confectioners' pans, etc., to erect a two-storey addition to their factory. Their present building stands back about 13 feet from the street line. They propose to extend it to the line by means of a pressed brick, two-storey modern front and at the same time they will erect an extensive addition to the back of the building. The entire building will be utilized in the industry.

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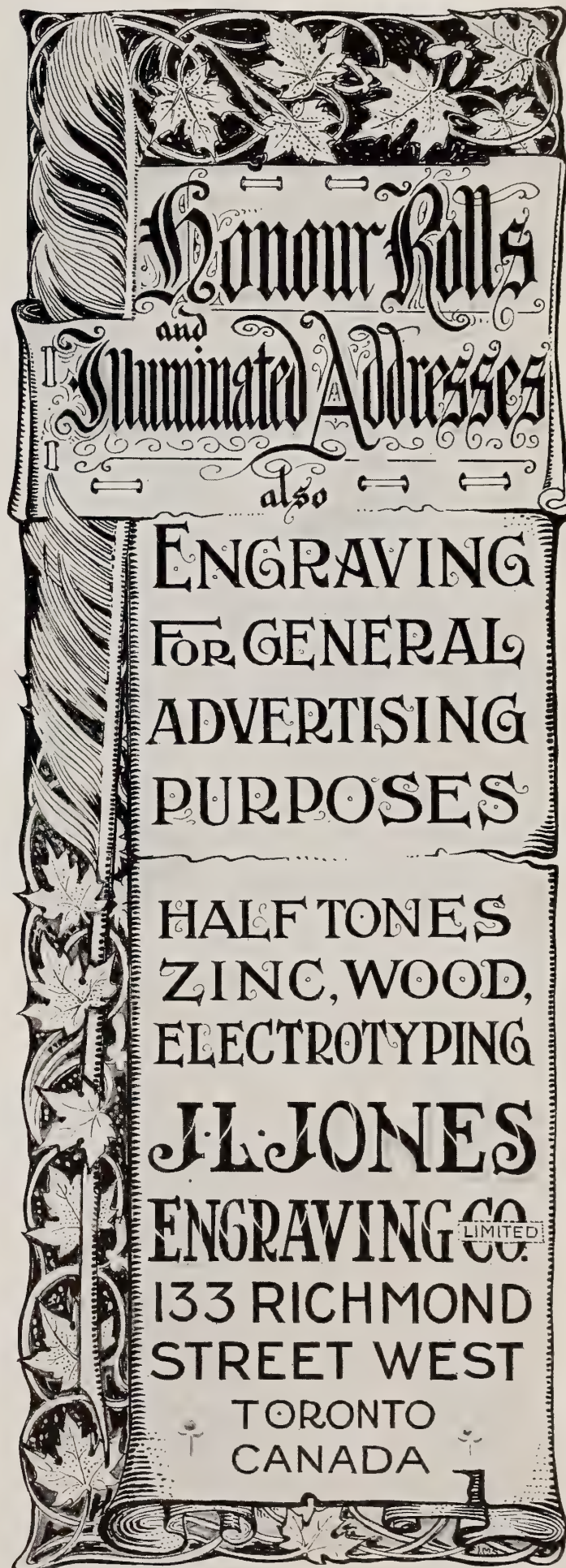
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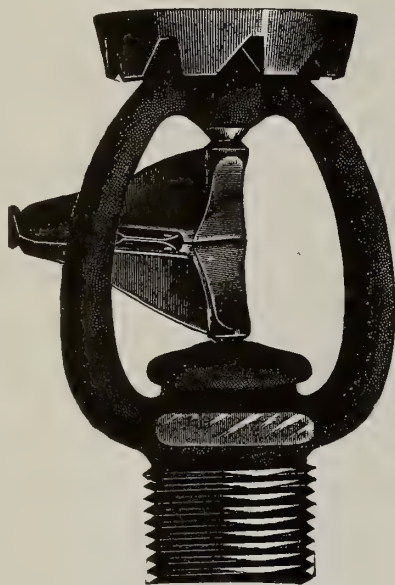
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throughout your Factory, Store or Ware-
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Correspondence Solicited

West Lorne.

A plant will be established by the West Lorne Motors, Limited, for the manufacture of gasoline tractors.

Whitby.

Ratepayers passed a by-law on January 3, authorizing the town to enter into an agreement on certain conditions with Charles Phillips or company to be formed by him to be known as the Whitby Silk Mills Co.

QUEBEC.

Granby.

*The F. S. Carr Rubber Co. of Canada, Limited, have acquired the buildings and machinery formerly belonging to the Walpole Rubber Co., Limited, in Granby, and will have the same in operation in about a month's time. The Carr Co. will equip the plant with an entirely new power system, consisting of steam boilers, engines and electric generators, which will in turn operate the electric motors connected with each of the machines. The plant consists of a five-storey brick building, equipped with automatic sprinklers connected with a fifty thousand gallon tank. There is also a separate three-storey brick building used for mixing rubber cement. It is not the company's intention to abandon their Tilbury plant at present. The Walpole Rubber Co., it will be remembered, was acquired by the Canadian Consolidated Rubber Co., and the Granby plant, now purchased by the Carr Co., was closed down.

Fire did considerable damage on January 25 to the plant of the R. B. McComiskey Co., manufacturers of combs.

Montreal.

The contract for the supply of steel for the erection of an open hearth furnace building and an electric furnace building, has been let to the Structural Steel Company, Limited, New Birks Building.

The Canadian Electro-Products Company, incorporated with a capital stock of \$500,000, has purchased the Record Foundry Building here, and is installing machinery for the manufacture of shells and other munitions. It will also install an electric furnace.

The contract for roofing required in connection with the factory which has been built for the Steel Company of Canada, has been let to Campbell, Gilday Company, Limited, 793 St. Paul Street West, and the heating to Thomas O'Connell, 183 Ottawa Street.

The Canada Cement Company, Limited, is building an electric furnace at its plant here.

The Canadian Steel Foundries, Limited, at Longue Pointe, have added to their plant one 30-ton acid open-hearth furnace.

The Riordon Pulp & Paper Company will shortly have an average output of 200 tons per day. Improvements are being made to their plant at Hawkesbury, Ont., which will add to their production 10 tons per day, and at Merritton they will install an electrolytic bleaching plant.

The Queen City Oil Co., Limited, are contemplating the erection of a large refinery, building operations to be started in the spring.

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General Fire Equipment Co., Limited

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Chicago Bridge & Iron Works
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ELEVATED STEEL TANKS AND STANDPIPES

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TOWN WATER SUPPLY
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Write, if interested



Quebec.

There is a report that the Ross Rifle Company, now employing over 1,500 men and paying two million dollars in salary annually, may leave Quebec and establish in Lindsay, Ont., if their application for an extension for ten years to their exemption from taxes is not granted.

The factory of the Rock Shoe Manufacturing Company has been destroyed by fire. The loss is \$75,000—insurance \$35,000.

Work will start in the spring on the construction of stock-yards, etc., for the Quebec Abattoir Company. The estimated cost is \$35,000.

Shawinigan Falls.

The Belgo-Canadian Pulp & Paper Company are installing a new 202-inch machine and it is expected to be in operation the end of this month. The output of the company will then be increased to about 185 tons daily.

Sherbrooke.

A new machine shop is being built by the Canadian Ingersoll Rand Company.

Weedon.

*The factory of the Weedon Chemical Co., which was recently destroyed by fire, is being rebuilt and will shortly be ready for operation. The company is at present looking for a location for another chemical factory for the manufacture of crude wood alcohol, acetate of lime and charcoal.

SASKATCHEWAN.**Moose Jaw.**

The Robin Hood Mills propose to erect a number of flour mills in the Western Provinces.

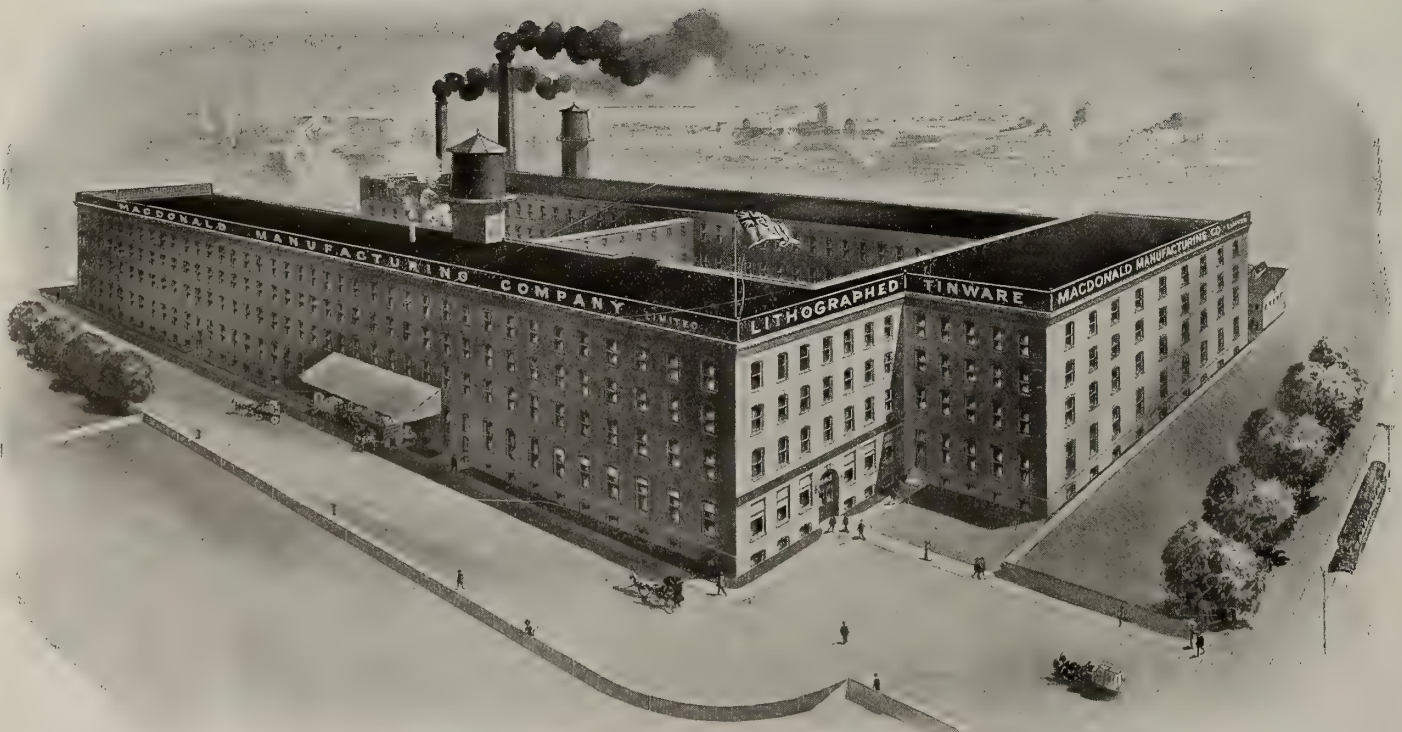
Regina.

*A refinery will be erected here by the Imperial Oil Co., Limited, for the purpose of supplying the petroleum product requirements of the Saskatchewan territory. Raw material for the refinery will be brought from the Wyoming fields by rail as far as Plentywood, Montana, whence it will be piped underground the remaining 160 or 170 miles to Regina. It is of course more expeditious and cheaper to convey oil through pipe lines than to haul it by rail.

NEW PRESIDENT OF DOMINION STEEL.

A new president has been elected by the directors of Canada's largest industrial corporation. At a meeting in Montreal on January 28, Mark Workman, president of the Mark Workman Company, Limited, clothing manufacturers, was selected to succeed J. H. Plummer as president of the Dominion Steel Corporation. It had been known for some time that Mr. Plummer was in poor health, and during the past few months, Lieut.-Col. Frederic Nicholls had acted as president of the company. It now transpires that the former president feels unable longer to carry the load of responsibility imposed on the shoulders of the man who is actively charged with the administration of the Corporation's affairs. He has accordingly become chairman of the board, leaving the office of president to be filled by a younger man.

Mr. Workman has been an active member of the steel directorate for a number of years, and is reputed to be the largest individual shareholder. He is a prominent figure in the industrial life of the country, having served on the boards of several companies.

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REDUCING FIRE WASTE.

In order to make Ohio's "Fire Prevention Day" mean something in its factory, the National Cash Register Company designed a large poster, five by four feet, which was placed in a conspicuous position throughout the factory.

This poster urged all employes to make a special effort to "clean up," by discarding waste material from their lockers, bench drawers, cabinets, cupboards, desks, book-cases, file cases, etc. On "Fire Prevention Day" this poster was supplemented with another bearing these sentences:

"At least 75 per cent. of fires are preventable. All fires are the same size when they start. The Governor of Ohio has proclaimed Saturday, Oct. 9, Fire Prevention Day. When the 'Clean-Up Whistle' blows Saturday morning, it will be a signal for you to clean out all rubbish, rags, waste paper and other useless material about your work

benches, lockers, and other places for which you are responsible. Place it in the centre aisle and it will be collected."

The results obtained from this effort exceeded expectations. Lockers and bench drawers that had been accumulating waste paper and rags for months were cleaned out. Several truck loads of rubbish were collected.

COMPETITION ALSO FROM UNITED STATES.

The incorporation in Dover, Del., of the Federal Dyestuff and Chemical Company of New York, with a capitalization of \$15,000,000, is believed in well-informed New York circles to mark the entrance of the Standard Oil Company and the Du Pont de Nemours Powder Company, either singly or in combination, into the dyestuff manufacturing field.

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THE FACTORY OF TO-DAY AND YESTERDAY.

Look back twenty years and recall the factories of those days. Or, if you prefer, go into the outskirts of your city and look at some of the industrial buildings of even more recent date.

What were the buildings of those days? Plain, ugly, blank walls with a few small windows located far apart. No thought nor struction. All that was required was any sort of a building, built in the cheapest way possible. On the inside of the factory the same lack of planning and forethought was visible, if anything at all were visible in the dark interior. But why picture this unpleasant building heritage? All of us have been in such factories and have felt their depressing influence.

Let us picture instead the modern factory of to-day, with its great walls of daylight that welcome cheerfulness and promote industry; with its interior that represents the last word in sanitation; with its marvelous, strong, fireproof construction of reinforced concrete; with its floor space as brightly lighted as outdoors. To be sure, such a factory is not the result of chance, for some of the greatest architects' minds in the country have been devoted to its development. The owner of the factory has given his own time and his organization to the perfection of every detail. The manufacturers of building material and equipment have been called upon for the services of their specialists. The perfect building is the result—perfectly adapted to the needs of the manufacturer and a perfect working home for the employee.

This factory building is making money for its owner every day. Surely, its initial cost is slightly more than the old building designed by the office boy; but it is producing large profits in increased output and better workmanship. In it are found enthusiastic, contented employes, who take pride in their work. For good measure there are the additional profits from lower insurance rates, fewer accidents and elimination of depreciation and repairs.

What were the causes of this remarkably rapid advance in factory construction? The striving for better sanitary conditions, the growing interest of manufacturers in their employes, the necessity of greater efficiency in production—all were influences towards this end. But the greatest impetus to modern factory construction was the discovery of the economical application of reinforced concrete to industrial buildings. The automobile industry, starting at the same time, was calling for new factories and gave the opportunity for the practical demonstration of the advantages of reinforced concrete. It is probably in Detroit that this new factory construction first proved its superiority so positively.

This new "skeleton" construction permits the use of narrow reinforced concrete columns in the walls, so that practically the entire wall space is available for windows. In the earlier days this space was filled with wooden sash, which of course were not entirely satisfactory. It remained for the introduction of steel sash to put the finishing touches on modern factory building, assuring to the window openings fireproofness, permanence and greater daylighting.

The modern idea of factory building has quickly won the enthusiastic approval of all manufacturers. To-day you will find that all industries, even the oldest and most conservative, have adopted the modern, day-light fireproof design for their new buildings.

WILL MANUFACTURE ELECTRIC STOVES

Following the development of electrical energy and facilities throughout the country, the McClary Mfg. Co. are now making electric stoves in their plant in Hamilton.

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WHAT THE LEIPZIG FAIR HAS MEANT TO GERMANY.

Proposed Lyons Fair.

The Leipzig institution has developed during a period of 700 years until it represents the most remarkable of modern centres of business. Beginning as a market for salt about the year 1190, it attracted many industries from all parts of northern Europe and became the most important market in the world, more particularly for furs, of which the yearly sales averaged over \$6,000,000, the total annual sales at the Fair exceeding \$50,000,000, and including furs, leather, hides, wool, cloth, linen and glass among other products. Industries have developed in the neighborhood of the Fair in great variety and Leipzig is now a city of over 500,000 inhabitants.

Countries contributing to such advancement have always looked upon it with envious eyes, more particularly when their products were dealt in, and Russia has been led to greatly desire that the centre of the fur trade should be at Moscow rather than at Leipzig, while the United States have made efforts to move a portion of the American fur trade to St. Louis.

During war time this feeling in regard to all trades is naturally intensified, and the French city of Lyons, through its delegate, Mr. M. L. Bernheim, has addressed a letter to Dr. Philippe Roy, General Commissioner for Canada at Paris, inviting Canadians to exhibit at the proposed Lyons Fair. This exposition will exhibit the national products of many countries and will be conducted along lines similar to those adopted in organizing the British Industries Fair, held last May at the Royal Agricultural Hall, London. It is hoped that the Lyons Fair will be to France what the Leipzig Exhibition was to Germany. Invitations are being given to dealers and manufacturers of the British Empire to take floor space at the exhibition, and an opportunity is hereby offered of making better known Canadian products amongst the French and other European people visiting the Fair.

A Canadian exhibit would doubtless now attract very favorable attention, and it has been suggested that if as a result of the war a desire exists to limit German trade by the encouragement of allied industry, such a beginning might prove an effective aid to the desired end. Applications for space at the exhibition should be addressed to Mr. M. L. Bernheim, delegate of the Lyons Fair Committee, Cecil Hotel, London.

HUDDERSFIELD TO HAVE GREAT DYE WORKS.

After carefully considering a number of locations the directors of British Dyes (Ltd.) have decided to establish their works for the production of synthetic dyes at Huddersfield. The purpose of this company is to manufacture dyes on such an extensive scale as to make the dye users of Great Britain independent of foreign supplies.

RECORD LINSEED OIL SHIPMENT.

William H. Evans, manufacturers' agent, Montreal, has just shipped by the Cunard line ss. *Tropea*, direct from Montreal to London, over thirty tons—about 175 barrels—of Canadian linseed oil. The order called for "Oil expressed from seed grown in Canada only." This establishes a precedent, as it is the first time that Canadian linseed oil has ever been exported to the Old Country.

The shipment would probably have been much larger but for the difficulty in securing space in the outgoing steamers.

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BOOSTER VS. KNOCKER.

When the Creator had made all the good things, there was still some dirty work to do, so He made the beasts and reptiles and poisonous insects, and when He had finished He had some scraps that were too bad to put into the Rattle-Snake, the Hyena, the Scorpion, and the Skunk, so He put all these together, covered it with suspicion, wrapped it with jealousy, marked it with a yellow streak, and called it a KNOCKER.

This product was so fearful to contemplate that He had to make something to counteract it, so He took a sunbeam and put in the heart of a child, the brain of a man, wrapped these in civic pride, covered it with brotherly love, gave it a mask of velvet and a grasp of steel and called it a BOOSTER; made him a lover of fields and flowers and manly

sports, a believer in equality and justice, and ever since these two were, mortal man has had the privilege of choosing his associates.—*Author unknown.*

WILL INSTALL ELECTRIC FURNACE.

An electric furnace plant for the manufacture of high grade steel is being installed in Montreal by the Canadian Electro-Products Company, recently incorporated with a capital of \$500,000. It is proposed to establish two units each with a capacity of 25 tons of steel per day. Mr. Julian C. Smith, of the Shawinigan Water and Power Company, and Mr. J. S. Norris, of the Montreal Light, Heat and Power Company, will be among the directors of the company.

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FOREIGN COMPETITION IN ARGENTINA.

The Commercial Intelligence Branch of the Board of Trade has received from a reliable source the following information regarding foreign competition in Argentina:—

In the five years 1908-12, the United Kingdom, France, the United States, and Germany supplied over two-thirds of the imports into Argentina, which averaged in value 350,000,000 pesos per annum. One-third of the imports from the United Kingdom consisted of coal and material for railways, and over one-third of the imports from the United States were accounted for by timber, crude oil and lighting oil. Excluding these items, imports from the United Kingdom in 1913 amounted to 87,000,000 pesos, from France 38,000,000 pesos, and from the United States 38,000,000 pesos, as compared with 71,000,000 pesos from Germany. The increase over 1908 was therefore 89 per cent. in the case of Germany, as compared with 33 per cent. for the United Kingdom, 57 per cent. for the United States and 49 per cent. for France.

Owing to the war former German sources of supply are stopped or curtailed. It is quite possible that all articles in which Germany had a trade with Argentina can be replaced by British, French or American goods, for out of every hundred classes of articles supplied by Germany only 26 are not in competition with the United Kingdom, France, or the United States. Of Germany's total export trade to Argentina, 85 per cent. of its value was in competition with the three countries named. Strong efforts are now being made by the United Kingdom, France and the United States to take advantage of the situation created by the war, especially in respect of the goods most in demand, which are German goods.

The articles, the demand for which under normal conditions would be satisfied by German manufacturers, are the following: Glow-lamps, steaming candles, paper and manufactures thereof, products of the lithographic press, soaps and perfumery, kid leather, colored cotton yarn, woollen and half-woollen stuffs, white and printed cotton goods, sewing silks, stockings, paper hangings, dry colors and lacquers, plain and barbed wire, cardboard and manufactures thereof, advertising matter, piano playing apparatus, bar and shaped iron, tools, stamped electro-technical articles, spun conducting wire, glass and glassware, porcelain and semi-porcelain, hardware, domestic and kitchen utensils, shoemakers' supplies, gutta-percha and rubber goods, dressed skins, tartaric acid, gas pipes and wrought-iron tubes, and connecting pieces.—The Board of Trade Journal.

GERMANY MAKES NEW BENZOL RULES.

In order to prevent the accumulation of benzol, or the manipulation of this product by the manufacturer so as to boost the price, the German government has issued a command, forbidding the manufacturing of benzol to all persons in the Empire, with the following exceptions: Chemical factories, engaged in the making of explosives or chemicals for the government; and chemical factories which agree to turn over the entire amount of toluol produced during the manufacture of benzol to the government. To make this latter order effective, every gallon of benzol offered to the German public for automobile use must be completely freed from toluol. If even a small quantity of toluol is contained in the benzol sold by the manufacturer, the latter is severely punished. The maximum amount of toluol permissible in benzol has been fixed at 1 per cent., the government realizing that in the course of forced production small quantities are liable to become mixed with the benzol.—*Scientific American*.

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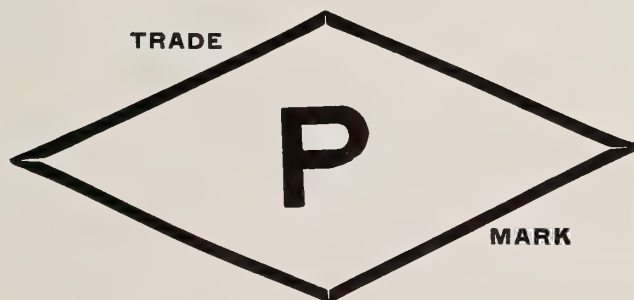
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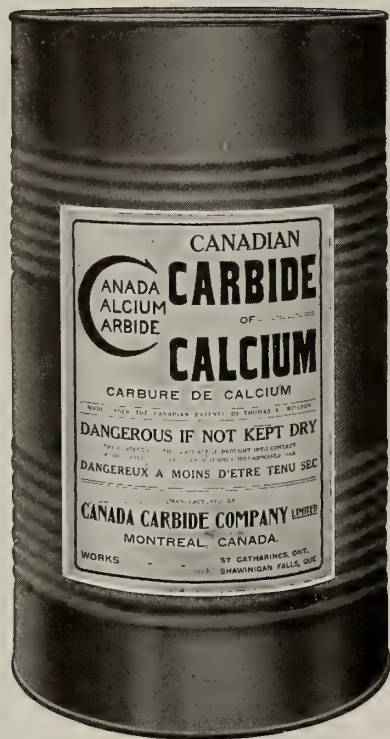
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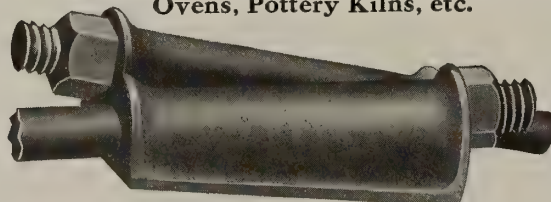
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ABRASIVE MATERIALS

- *Canadian Hart Wheels, Ltd., Hamilton, Ont.
- *Dominion Abrasive Wheel Co., New Toronto, Ont.

ACCOUNT BOOKS

- *The Brown Bros., Ltd., Toronto.

ACCOUNTING FORMS

- Business Systems, Ltd., Toronto.

ACETYLENE GAS BURNERS

- Economic Acetylene Burner Co., Toronto.

ACIDS

- *The Grasselli Chemical Co., Ltd., Toronto.
- *The Nichols Chemical Co., Ltd., Montreal.

ADJUSTARODS

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ADVERTISING NOVELTIES

- Lawson & Jones, Ltd., London, Ont.

AERATED BEVERAGES

- Charles Gurd & Co., Ltd., Montreal, Que.
- J. J. McLaughlin, Ltd., Toronto.

ALCOHOL

- The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.
- *Hiram Walker & Sons, Limited, Walkerville, Ont.

ALE

- E. L. Drewry, Winnipeg, Man.

ALUMINUM

- *Northern Aluminum Co., Ltd., 1305 Traders Bank, Toronto.

ALUMINUM CASTINGS

- *Tallman Brass & Metal Co., Hamilton, Ont.

AMMONIA

- Canadian Ammonia Co., Ltd., Toronto.

ANGLE BARS

- *The Steel Company of Canada, Limited, Hamilton, Ont.

ARC AND INCANDESCENT HEADLIGHTS (Electric)

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ASBESTOS:

- *Eureka Mineral Wool & Asbestos Co., Toronto.

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- *Canadian H. W. Johns-Manville Co., Toronto.
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- *Canadian H. W. Johns-Manville Co., Toronto.
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- *Canadian H. W. Johns-Manville Co., Toronto.
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ATHLETIC UNDERWEAR

- Williams, Green & Rome Co., Ltd., Berlin, Ont.

AUTOMOBILE ACCESSORIES,

- *Northern Electric Co., Limited, Montreal.
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AUTOMOBILE PARTS

- *Dominion Forge & Stamping Co., Walkerville, Ont.

AWNING CORD (cotton)

- Hamilton Cotton Co., Hamilton, Ont.

AXLES

- Canada Forge Co., Ltd., Welland, Ont.
- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

AXLES, carriage and automobile

- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

BABBITT METAL

- Alonzo W. Spooner, Limited, Port Hope, Ont.
- *The Canada Metal Co., Toronto.
- *Tallman Brass & Metal Co., Hamilton, Ont.

BACON

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BAGS

- *Scythes & Co., Ltd., Toronto.

BAGS, Cotton

- The Canadian Bag Co., Ltd., Montreal, Que.

BAGS, jute

- The Canadian Bag Co., Ltd., Montreal, Que.

- *Scythes & Co., Ltd., Toronto.

BAGS, travelling

- J. Eveleigh & Co., Ltd., Montreal, Que.
- Lamontagne, Ltd., Montreal, Que.
- The M. Langmuir Mfg. Co., of Toronto, Ltd., Toronto.

BAKING JAPAN

- *Berry Bros., Ltd., Winnipeg, Man.

BAND RESAWS:

- *Berlin Machine Works, Ltd., Hamilton, Ont.

BANK AND OFFICE RAILINGS

- *The Geo. B. Meadows, Toronto, Wire, Iron & Brass Works Co., Ltd., Toronto.
- *Canada Wire and Iron Works, Hamilton, Ont.

BANK FITTINGS

- The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

BANK RAILINGS AND CAGES

- *Canada Wire and Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London.

BANK SIGNS AND FITTINGS

- *Tallman Brass & Metal Co., Hamilton, Ont.

BARs, iron

- London Rolling Mill Co., Limited, London, Ont.

BARs, steel

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BASEBALL GOODS

- A. J. Reach Co., Brantford, Ont.

BATHS, enamelled

- Amherst Foundry Co., Ltd., Amherst, N.S.

BATTERIES, dry

- The Canadian National Carbon Co., Ltd., Toronto.
- Canadian Carbon Company, Ltd., Toronto.

BEARINGS

- *The Chapman Double Ball Bearing Co., Ltd., Toronto.
- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS, bronze

- *Tallman Brass & Metal Co., Hamilton, Ont.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

- *Dodge Mfg. Co., Ltd., Toronto.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEDS, camp folding

- *Otterville Mfg. Co., Ltd., Otterville, Ont.

BEEF

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BEER

- E. L. Drewry, Winnipeg, Man.

BELTING, chains

- *Dodge Mfg. Co., Ltd., Toronto.
- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BELTING, Elevator

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

BELTING, leather

- The Beardmore Belting Co., Ltd., Toronto.
- *J. L. Goodhue & Co., Danville, P.Q.
- *Sadler & Howarth, Montreal.
- *The D. K. McLaren Belting Co., Ltd., Montreal.
- *The J. C. McLaren Belting Co., Ltd., Montreal.

BELTING, rubber

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.
- Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
- *Gutta Percha & Rubber, Limited, Toronto.

BENT GOODS

- The Crown Lumber Co., Woodstock, Ont.

BICYCLES AND ACCESSORIES

- *Canada Cycle and Motor Co., Ltd., Toronto.

BILLIARD BALLS

- Samuel May & Co., Toronto.

BINDERS, loose leaf

- Business Systems, Ltd., Toronto.

BISCUITS

- The Montreal Biscuit Co., Montreal, Que.

BLACK SHEETS

- *A. C. Leslie & Co., Montreal.

BLANK BOOKS

- Business Systems, Ltd., Toronto.

BLANKETS

- Slingsby Mfg. Co., Ltd., Brantford, Ont.
- J. Walsham & Son, Ltd., Bolton, Ont.

BLANKETS, horse

- Slingsby Mfg. Co., Ltd., Brantford, Ont.
- J. Walsham & Son, Limited, Bolton, Ont.

BLASTING ACCESSORIES

- Canadian Explosives, Ltd., Montreal, Que.

BLEACHING POWDER

- Canadian Salt Co., Ltd., Windsor, Ont.

BLOWERS

- *Sheldons, Ltd., Galt, Ont.

BOATS OF ALL KINDS

- Peterboro Canoe Co., Ltd., Peterboro, Ont.

BOILER COMPOUND and OILS

- *Canadian H. W. Johns-Manville Co., Toronto.
- Electric Boiler Compound Co., Ltd., Guelph, Ont.

BOILERS

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Goldie & McCulloch Co., Limited, Galt, Ont.
- John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.
- *Polson Iron Works, Ltd., Toronto.
- J. & R. Weir, Montreal, Que.
- Taylor-Forbes Co., Ltd., Guelph, Ont.
- *Jenckes Machine Co., Sherbrooke, Que.
- *The Waterous Engine Works Co., Ltd., Brantford.

BOILERS, heating

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BOILERS, hot water or steam

- Warden King, Ltd., Montreal, Que.

BOILERS, steam.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.
- Steel and Radiation Ltd., Toronto.
- Warden King, Ltd., Montreal, Que.
- *The Waterous Engine Works Co., Ltd., Brantford, Ont.

BOILERS, steam and brass work

- *The Waterous Engine Works Co., Ltd., Brantford, Ont.

BOILER FEED PUMPS

- *The Bawden Machine Co., Limited, Toronto.

BOILER STANDS

- Anthes Foundry Ltd., Toronto.

BOLSTERS

- *Canadian Car & Foundry Co., Ltd., Montreal, Que.

BOLTS

- *The National Acme Mfg Co., Montreal, Que.

BOLTS AND NUTS

- *The Canadian Tube & Iron Co., Ltd., Montreal, Que.
- *The Steel Company of Canada, Limited, Hamilton, Ont.
- Starr Mfg. Co., Ltd., Dartmouth, N.S.

BOOKBINDERS

- R. G. McLean, Toronto.
- *The Brown Bros., Ltd., Toronto.

BOOKCASES, sectional (Gunn)

- The George McLagan Furniture Co., Ltd., Stratford, Ont.

BOOKLETS

- Stone Limited, Toronto.
- R. G. McLean, Toronto.

BOOKS, blank

- *The Brown Bros., Ltd., Toronto.

BOOTS AND SHOES

- Ames-Holden-McCreedy, Ltd., Montreal, Que.
- J. Leckie Co., Ltd.
- The John Ritchie Co., Ltd., Quebec, Que.

BOWLING ALLEYS

- Samuel May & Co., Toronto.

BOXES, cellular board:

- *The Thompson & Norris Co. of Canada, Ltd., Niagara Falls.

BOXES, rattle and soap

- The Arlington Co. of Canada, Ltd., Toronto.

BOXES AND SHOOKS, wooden

- The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

BOXES, wooden

- G. & J. Esplen, Montreal, Que.
- Barchard & Co., Ltd., Toronto.

BRAIDS AND TRIMMINGS

- The Moulton Mfg. Co., Limited, Montreal.

BRAKE SHOES

- *Canadian Hart Wheels, Limited, Hamilton, Ont.

BRANDS, burning

- Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS BOLTS AND NUTS

- *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS, BRONZE and ALUMINUM LETTERS

- *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS ENGRAVERS

- Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS FOUNDERS AND FINISHERS

- *The Booth-Coulter Copper & Brass Co., Ltd., Toronto.
- *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS GOODS

*The Booth-Coulter Copper & Brass Co., Ltd., Toronto.
 *Mueller Mfg. Co., Sarnia.
 The Garth Co., Montreal, Que.
 The James Morrison Brass Mfg. Co., Ltd., Toronto.
 *The Kerr Engine Co., Ltd., Walkerville, Ont.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS PLATES

Geo. Booth & Son., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS RODS, SHEETS AND PLATES

*Brown's Copper and Brass Rolling Mills, Ltd., New Toronto.

BRASS SIGNS AND MEMORIALS

*Tallman Brass & Metal Co., Hamilton, Ont.

BRASS TUBING, seamless

Canadian Seamless Wire Co., Ltd., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS WIRE

Canadian Seamless Wire Co., Ltd., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS WORK, church

Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS WORK, special

Bawden Machine Co., Ltd., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.
 *Booth-Coulter Copper & Brass Co., Ltd., Toronto.
 *The Watrous Engine Works Co., Ltd., Brantford, Ont.

BRICK

National Brick Co. of Laprairie, Laprairie, P.Q.
 Port Credit Brick Co., Port Credit, Ont.

BRICK, enamel

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, pressed

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, rubbing

*Canadian Hart Wheels, Limited, Hamilton, Ont.

BRICK, sewer

National Brick Co. of Laprairie, Laprairie, P.Q.

BRIDGES, Railway and Highway

*Dominion Bridge Co., Montreal.
 *Hamilton Bridge Works Co., Ltd., Walkerville, Ont.
 *The Canadian Bridge Co., Ltd., Hamilton, Ont.
 *The Structural Steel Co., Limited, Montreal, Que.

BRINE PUMPS

*The Bawden Machine Co., Ltd., Toronto.

BROOMS

Simms, T. S., & Co., Limited, St. John, N.B.
 Stevens-Hepner Co., Limited, Port Elgin, Ont.
 *Boeckh Bros. Co., Toronto.

BRUSHES

*Boeckh Bros. Co., Toronto.
 Simms, T. S., & Co., Limited, St. John, N.B.
 Stevens-Hepner Co., Limited, Port Elgin, Ont.

BRUSHES, carbon

Canadian National Carbon Co., Ltd., Toronto.

BUCKET TANKS

*The General Fire Equipment Co., Limited, Toronto, Ont.

BUCKLES, shoe and coat

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

BUILDING

Bathurst Lumber Co. Ltd., Bathurst, N.B.

BUILDING BLOCKS, vitrified, salt glazed

Standard Clay Products, Ltd., St. Johns, Que.

BUILDING FELT and PAPER

*Canadian H. W. Johns-Manville Co., Toronto.
 *Eureka Mineral Wool & Asbestos Co., Toronto.
 *Paterson Manufacturing Company, Toronto and Montreal.

BUILDERS, ship

*Polson Iron Works, Limited, Toronto.
 J. & R. Weir, Montreal, Que.

BURLAPS

The Canadian Bag Co., Limited, Montreal, Que.
 *Scythes & Co., Ltd., Toronto.

BURLAPS, decorative

Dominion Oil Cloth Co., Limited, Montreal, Que.

CABINETS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CABLE, Copper and galvanized

*The Steel Co. of Canada, Ltd., Hamilton, Ont.

CABLES, transmission and telephones

*Eugene F. Phillips Electrical Works, Ltd., Montreal, Que.

CABLES, Transmission and Cable

*Northern Electric Co., Limited, Montreal, Que.

CABLES, wire

The Dominion Wire Rope Co., Ltd., Montreal, Que.
 *The B. Greening Wire Co., Ltd., Hamilton, Ont.

CALENDARS, ADVERTISING

NOVELTIES, etc.
 Rolph & Clark, Limited, Toronto.
 Lawson & Jones, Limited, London, Ont.
 Stone Limited, Toronto.

CAMERAS

Canadian Kodak Co., Limited, Toronto.

CAMPERS' OUTFITTERS

Slingsby Mfg. Co., Ltd., Brantford, Ont.

CANOEES

Peterboro Canoe Co., Ltd., Peterboro, Ont.

CANS, baking powder, etc.

American Can Co., Montreal and Hamilton.
 A. R. Whittall, Montreal, Que.

CANS, fruit

American Can Co., Montreal and Hamilton.
 A. R. Whittall, Montreal, Que.

CANS, tin

A. R. Whittall, Montreal, Que.
 American Can Co., Montreal and Hamilton.

CANS, iron, lead and putty

A. R. Whittall, Montreal, Que.

CANVAS

*Scythes & Co., Ltd., Toronto.

CAPS, cloth

John W. Peck & Co., Ltd., Montreal, Que.

CARBIDE

*Canada Carbide Co., Ltd., Montreal, Que.

CARBON BRUSHES

Canadian Carbon Co., Limited, Toronto.

CARBON PRODUCTS

Canadian Carbon Co., Limited, Toronto.

CARBONS, arc light

Canadian Carbon Co., Limited, Toronto.
 The Canadian National Carbon Co., Ltd.

CARBONS, flame

Canadian Carbon Co., Limited, Toronto.

CARBONIC ACID GAS

Canadian Carbonate Company, Ltd., Montreal, Que.

CARBIDE OF CALCIUM

*Canada Carbide Co., Ltd., Montreal, Que.

CARDBOARD

Bathurst Lumber Co., Ltd., Bathurst, N.B.

CARPETS AND RUGS

Toronto Carpet Mfg. Co., Limited, Toronto.

CARPETS AND RUGS, Axminster

and ingrain
 Toronto Carpet Mfg. Co., Limited, Toronto.

CARPETS AND RUGS, Brussels

and Wilton
 Toronto Carpet Mfg. Co., Limited, Toronto.

CARPET YARNS, worsted and wool

Toronto Carpet Mfg. Co., Limited, Toronto.

CARRIAGES, baby, etc.

Canada Furniture Manufacturers, Ltd., Woodstock, Ont.

CARRIERS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

CARRIERS, box and barrel

Canadian Mathews Gravity Carrier Co., Limited, Toronto.

CARRIERS, brick

Canadian Mathews Gravity Carrier Co., Limited, Toronto.

*Richards-Wilcox Canadian Co., Ltd., London, Ont.

CARS

Canadian Car & Foundry Co., Ltd., Montreal, Que.

*National Steel Car Co., Limited, Hamilton, Ont.

CARS, industrial

*Sheldons, Ltd., Galt.

CARTONS, lithographed

Harris Lithographing Co., Toronto.

CASTINGS

*Tallman Brass & Metal Co., Hamilton, Ont.

CASTINGS, aluminum

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

CASTINGS, brass

*Tallman Brass & Metal Co., Hamilton, Ont.

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

CASTINGS, brass and bronze

*Tallman Brass & Metal Co., Hamilton, Ont.

CASTINGS, grey iron

*Dodge Mfg. Co., Toronto.
 *Canadian Car & Foundry Co., Ltd., Montreal, Que.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

CASTINGS, malleable iron

*Galt Malleable Iron Co., Ltd., Galt, Ont.

*Pratt & Letchworth Co., Brantford, Ont.

CASTINGS, steel

*Canadian Steel Foundries, Ltd., Montreal, Que.

*Dominion Steel Foundry Co., Ltd., Hamilton, Ont.

Hull Iron and Steel Foundry, Ltd., Hull, P.Q.

*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

CATALOGUE MAKERS

Grip, Ltd., Toronto.
 R. G. McLean, Toronto.

CAUSTIC SODA

Canadian Salt Co., Ltd., Windsor, Ont.

CEMENT GUNS

Steel and Radiation, Ltd., Toronto.

CHAIRS, assembly hall

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, folding

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, rattan and upholstered
 Imperial Rattan Co., Ltd., Stratford, Ont.

CHEMICALS

*The Grasselli Chemical Co., Ltd., Toronto.

*The Nichols Chemical Co., Ltd., Montreal, Que.

CHEMICAL LABORATORY

APPARATUS
 The Geo. M. Hendry Co., Limited, Toronto.

CHICLETS AND CHEWING GUM

Canadian Chewing Gum Co., Ltd., Toronto.

CIGARS

Ed. Youngheart & Co., Limited, Montreal, Que.

CIGARETTES AND TOBACCO

Philip Morris & Co., Limited, Montreal, Que.

CIRCULAR CUTTERS, solid steel
 The Peter Hay Knife Co., Limited, Galt, Ont.

CLAM SHELL BUCKETS

*M. Beatty & Sons, Ltd., Welland, Ont.

CLOCKS AND CLOCK MOVEMENTS

The Arthur Pequegnat Clock Co., Berlin, Ont.

CLOCKS, TIME

*International Time Recording Co. of Canada, Ltd., Toronto.

CLOCKS, WATCHMEN'S

*The General Fire Equipment Co., Limited, Toronto.

CLOSET SEATS

*Goderich Organ Co., Goderich, Ont.

CLOTHING

John W. Peck & Co., Ltd., Montreal, Que.

Mackenzie & Co., Ottawa, Ont.

CLOTHING, leather and sheepskin lined coats
 *A. R. Clarke & Co., Ltd., Toronto.

CLOTHING, Mackinaw

The Carss Mackinaw Clothing Co., Ltd., Orillia, Ont.

CLOTHES LINES, cotton

Hamilton Cotton Co., Hamilton, Ont.

CLUTCHES

*Dodge Mfg. Co., Ltd., Toronto.

CLUTCHES, conveyors

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

COAL

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.
 Standard Fuel Co., Toronto.

COBALT OXIDE

The Coniagas Reduction Co., Ltd., St. Catharines, Ont.

COCOA AND CHOCOLATE PREPARATIONS

Walter Baker & Co., of Canada, Ltd., Montreal, Que.

COFFEE

S. H. Ewing & Sons, Montreal, Que.

COFFEE IMPORTERS, Roasters and Manufacturers

C. H. Cochran & Co., Ottawa, Ont.

COLD DRAWN SHAPES, flats, squares and hexagons

*The Canadian Drawn Steel Co., Ltd., Hamilton, Ont.

*Union Drawn Steel Co., Limited, Hamilton, Ont.

COLD STORAGE DOORS

John Hillock & Co., Ltd., Toronto.

COLLAR BUTTONS

The Arlington Co. of Canada, Ltd., Toronto.

COLLARS

The Standard Shirt Co., Limited, Montreal, Que.

COLLARS, coated linen

Parsons & Parsons Canadian Co., Hamilton, Ont.

COLLARS AND CUFFS, waterproof
 Williams, Greene & Rome, Berlin, Ont.

COLORS

Brandram-Henderson, Limited, Montreal, Que.

A. Ramsay & Son Co., Montreal, Que.

Sherwin Williams Co. of Canada, Ltd., Montreal, Que.

COMBS, fine dressing and name
 The Arlington Co. of Canada, Ltd., Toronto.

COMMERCIAL STATIONERS

Rolph & Clark, Ltd., Toronto.

COMMERCIAL STATIONERY

*Brown Bros., Ltd., Toronto.

CONCENTRATORS

*Jenckes Machine Co., Sherbrooke, Que.

CONCRETE COATINGS, paints, etc.
 The Imperial Varnish & Color Co., Limited, Toronto.

CONDUITS FOR INTERIOR WIRING

*Conduits Company, Ltd., Toronto.

CONDULETS FOR ELECTRICAL INSTALLATIONS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CONFECTIONERY

Ganong Bros., Ltd., St. Stephens, N.B.
Moirs, Limited, Halifax, N.S.
The Montreal Biscuit Co., Montreal, Que.

CONTRACTORS' PLANT

*M. Beatty & Sons, Ltd., Welland, Ont.

CONVEYORS

*Dodge Mfg. Co., Ltd., Toronto.
*Jenckes Machine Co., Sherbrooke, Que.

COPPER

*Eugene F. Phillips, Electrical Works, Limited, Montreal.
*Booth-Coulter Copper & Brass Co., Limited, Toronto.

COPPER SHEETS AND PLATES

*Booth-Coulter Copper & Brass Co., Limited, Toronto.
*Tallman Brass & Metal Co., Hamilton, Ont.

COPPERSMITHS

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

COPPER TUBING, seamless

Canadian Seamless Wire Co., Ltd., Toronto.
*Booth-Coulter Copper & Brass Co., Limited, Toronto.

COPPERWARE AND LANTERNS

Sheet Metal Products Co. of Canada, Limited, Toronto.

COPPER WIRE

Canadian Seamless Wire Co., Ltd., Toronto.

CORKS

S. H. Ewing & Sons, Montreal, Que.

CORK CARPET

Dominion Oil Cloth Co., Ltd., Montreal, Que.

CORRUGATED BOXES

*Hinds & Dauch Paper Co., Toronto.
*Martin Corrugated Paper & Box Co., Limited, Toronto.
*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORRUGATED PAPER

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORSETS

Dominion Corset Co., Quebec, Que.

COTTONS

*Dominion Textile Co., Limited, Montreal, Que.
*Montreal Cottons, Ltd., Valleyfield, P.Q.

COTTONADES

Hamilton Cotton Co., Hamilton, Ont.

COUPLERS

*Canadian Steel Foundries, Ltd., Welland, Ont.

CRANES

*Northern Crane Works, Walkerville, Ont.

COUPLINGS

*Dodge Mfg. Co., Ltd., Toronto.

CRANKSHAFTS

Canada Forge Co., Ltd., Welland, Ont.

CREAM CHEESE, Ingersoll

The Ingersoll Packing Co., Limited, Ingersoll, Ont.

CREAM SEPARATORS AND MILK CLARIFIERS

De Laval Dairy Supply Co., Peterboro, Ont.

CREAMERY AND CHEESE FACTORY MACHINERY AND SUPPLIES

De Laval Dairy Supply Co., Ltd., Montreal, Que.

CREOSOTED MATERIALS

*Paterson Mfg. Co., Toronto and Montreal.

CRUSHED STONE

The Hagersville Contracting Co., Limited, Hagersville, Ont.

CRUSHING ROLLS

*Jenckes Machine Co., Sherbrooke, Que.

CUES

Samuel May & Co., Toronto.

CUPOLAS

*Sheldons, Ltd., Galt, Ont.
*Northern Crane Works, Limited, Walkerville, Ont.

CUPS, presentation

Standard Silver Co., Toronto.

CUPS, grease and oil

*The Canadian Winkley Co., Ltd., Windsor, Ont.

CURLED HAIR

*Delany and Pettit, Ltd., Toronto.

CURTAINS, chenille

Hamilton Cotton Co., Hamilton, Ont.

CUTLERY

Standard Silver Co., Toronto.
Canadian Wm. A. Rogers, Ltd.

DENIMS

Hamilton Cotton Co., Hamilton, Ont.

DERAILS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

DESIGNERS

Ontario Engraving Co., Hamilton, Ont.

DESIGNERS and PRINTERS OF BOOKLETS, ETC.

Grip, Ltd., Toronto.

DINING ROOM SUITES

The George McLagan Furniture Co., Limited, Stratford, Ont.

DIES

*Butterfield & Co., Rock Island, P.Q.

DISINFECTING APPARATUS

Spramotor Co., London, Ont.

DOOR HANGERS

*Richards Wilcox Canadian Co., Ltd., London, Ont.

DRAPERY AND UPHOLSTERY GOODS

Daly & Morin, Montreal, Que.

DREDGES

*M. Beatty & Sons, Limited, Welland, Ont.

DRESSING, belt.

Sadler & Haworth, Montreal, Que.

DRESS AND CLOAK TRIMMINGS

J. Henry Peters Co., 1 Mincing St., Toronto.

DRILLS

*John Morrow Screw & Nut Co., Limited, Ingersoll, Ont.

DRIFT BOLTS OR SPIKES

London Rolling Mill Co., Limited, London, Ont.

DROP FORGINGS

*Canadian Billings & Spencer, Ltd., Welland, Ont.

DRY CELLS, electric

Canadian Carbon Co., Limited, Toronto.

DRY COLORS

P. D. Dods & Co., Ltd., Montreal, Que.

The Imperial Varnish & Color Co., Limited, Toronto.

R. C. Jamieson & Co., Ltd., Montreal, Que.

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

DUMB WAITERS

Turnbull Elevator Mfg. Co., Toronto.

DURABLE WIRE ROPE

The Dominion Wire Rope Co., Ltd., Montreal, Que.

DYNAMITE

Canadian Explosives, Limited, Montreal, Que.

DYNAMOS

Consolidated Electric Co., Limited, Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*The Canadian Crocker-Wheeler Co., Limited, St. Catharines, Ont.

DYNAMOS, plating

*Jones & Moore Electric Co., Ltd., Toronto.

EIDERDOWN

Galt Knitting Co., Ltd., Galt.

ELECTRIC APPLIANCES

*Canadian Crocker-Wheeler Co., Limited, St. Catharines, Ont.

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

ELECTRICAL COMPOUNDS

Standard Paint Co. of Canada, Ltd., Montreal, Que.

ELECTRICAL AND GAS FIXTURES

The Garth Co., Montreal, Que.
The James Morrison Brass Mfg. Co., Limited, Toronto.
*Tallman Brass and Metal Co., Hamilton, Ont.

ELECTRIC LAMPS

Packard Electric Co., Limited, Toronto.

ELECTRIC PLATE WARE

Roden Bros., Ltd., Toronto.

ELECTRIC BATTERIES

Canadian Carbon Co., Limited, Toronto.

ELECTROTYPING

Central Press Agency, Toronto.

ELECTRICAL SUPPLIES

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Northern Electric Co., Limited, Montreal, Que.

ELECTRO-SILVER PLATED WARE

Standard Silver Co., Toronto.

ELEVATORS

*Jenckes Machine Co., Sherbrooke, Que.

Turnbull Elevator Manufacturing Company, Toronto.

*The Watrous Engine Works Co., Ltd., Brantford, Ont.

*Northern Crane Works, Limited, Walkerville, Ont.

ELEVATORS FOR ALL PURPOSES

*The Watrous Engine Works Co., Limited, Brantford, Ont.

ELEVATOR GATES AND DOORS

Turnbull Elevator Mfg. Co., Ltd., Toronto.

ELEVATOR GUARDS

*The Geo. B. Meadows, Toronto

Iron and Brass Goods Works Co., Limited, Toronto.

*Canada Wire and Iron Works, Hamilton, Ont.

ELEVATORS, hydraulic and electric

John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

EMERY DRESSERS AND STANDS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

EMERY GRINDERS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

EMERY WHEELS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

EMERY WHEEL GUARDS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

EMERY WHEEL Safety Flanges

*Canadian Hart Wheels, Limited, Hamilton, Ont.

ENAMELS

R. C. Jamieson & Co., Limited, Montreal, Que.

ENAMEL MANUFACTURERS AND DECORATORS

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

ENAMEL AND TIN WARE

McClary Mfg. Co., London, Ont.

ENGINES

*E. Leonard & Sons, London, Ont.

*Goldie & McCulloch Co., Limited, Galt, Ont.

J. & R. Weir, Montreal, Que.

*Polson Iron Works, Limited, Toronto.

*Sheldons, Ltd., Galt, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

ENGINES, gas and gasoline

*Goold-Shapley-Muir Co., Limited, Brantford, Ont.

*Massey-Harris Co., Ltd., Toronto.

ENGINES, gasoline, tractor, plowing and threshing

*Sawyer-Massey Co., Ltd., Hamilton, Ont.

ENGINES, hoisting

*M. Beatty & Sons, Welland, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

ENGINES, steam plowing and threshing

Sawyer-Massey Co., Limited, Hamilton, Ont.

ENGRAVERS

Grip, Limited, Toronto.

Ontario Engraving Co., Hamilton, Ont.

Rolph & Clark, Limited, Toronto.

Stone, Limited, Toronto.

ENGRAVERS, half-tone

Grip, Limited, Toronto.

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS, wood

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS AND PRINTERS

steel plate
American Bank Note Co., Ottawa, Ont.

ENGRAVERS AND PRINTERS

banknote
American Bank Note Co., Ottawa, Ont.

ENGRAVING

*J. L. Jones Engraving Company, Toronto.

ENGRAVING, copper and steel

plate
Pritchard-Andrews Co. of Ottawa, Limited, Ottawa, Ont.

ENSILAGE AND STRAW

CUTTERS
J. Fleury's Sons, Aurora, Ont.

ENVELOPES

Barber-Ellis Co., Ltd., Toronto.

Canada Envelope Co., Montreal, Que.

ENVELOPES, Transos.

Business Systems, Ltd., Toronto.

EXCELSIOR

*Delany & Pettit, Ltd., Toronto.

EXCELSIOR PADS

*Delany & Pettit, Ltd., Toronto.

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

EXPERTS IN PATENT CAUSES

Ridout & Maybee, Toronto.

EXPLOSIVES, high

Canadian Explosives Ltd., Montreal, Que.

FACE PLATE JAWS

Ker & Goodwin, Brantford, Ont.

FACTORY SUPPLIES, cheese and creamery

De Laval Dairy Supply Co., Ltd., Montreal, Que.

J. Henry Peters Co., 1 Mincing St., Toronto.

FANS

*Sheldons, Limited, Galt, Ont.

FASTENERS, belt

*Sadler & Haworth, Montreal, Que.

FENCES AND GATES

*Dennis Wire & Iron Works Co., London, Ont.

*Canada Wire and Iron Works, Hamilton, Ont.

FENCING AND GATES, woven

wire
Banwell Hoxie Wire Fence Co., Hamilton, Ont.

*Canada Wire and Iron Goods Co., Hamilton, Ont.

FENCING, wire

The Great West Wire Fence Co., Ltd., Winnipeg, Man.

C. H. Johnson & Sons, Limited, Montreal, Que.

FIBRE PAIS

*The E. B. Eddy Co., Ltd., Hull, Que.

FILES

Henry Disston & Sons, Limited, Toronto.

*The Nicholson File Co., Port Hope, Ont.

FIRE ALARMS

*Northern Electric Co., Limited, Montreal, Que.

FIRE DOOR HARDWARE

*Richards Wilcox Canadian Co., Limited, London, Ont.

FIRE ENGINES

*The Watrous Engine Works Co., Limited, Brantford, Ont.

FIRE ESCAPES

- *Canadian Wire and Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London, Ont.

FIRE EXTINGUISHERS

- *Booth-Coulter Copper and Brass Co., Limited, Montreal, Que.
- *Canadian H. W. Johns-Manville Co., Toronto.
- *The General Fire Equipment Co., Limited, Toronto, Ont.

FIRE FIGHTING APPARATUS

- *The Watrous Engine Works Co., Limited, Brantford, Ont.

FIRE HOSE

- *Canadian Consolidated Rubber Co., of Canada, Limited, Montreal, Que.
- Dunlop Tire and Rubber Goods Co., Limited, Toronto.
- *Gutta Percha and Rubber, Ltd., Toronto.

FIRE PREVENTION MATERIAL

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- *Eureka Mineral Wool & Asbestos Co., Toronto.
- *The General Fire Equipment Co., Limited, Toronto.

FIRE-PROOF WINDOWS AND DOORS

- *Pedlar People, Ltd., Oshawa, Ont.

FIRE SPRINKLER SYSTEMS

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- *The General Fire Equipment Co., Limited, Toronto.
- *Purdy Mansell Co., Toronto.
- *H. G. Vogel Co., Montreal, Que.

FIRE AND WATER DEPARTMENT SUPPLIES

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- The Garth Co., Montreal, Que.

FISH, Atlantic Sea-Foods

- Maritime Fish Corporation Ltd., Montreal, Que.

FITTINGS FOR SOIL PIPE

- Anthes Foundry, Ltd., Toronto.

FITTINGS, steam

- Warden King, Ltd., Montreal, Que.

FLAGS

- *Scythes & Co., Limited, Toronto.

FLASHLIGHTS

- Canadian Carbon Co., Toronto.

FLOORING, hardwood

- Seaman Kent Co., Ltd., Meaford, Ont.

FLUE LINERS

- Standard Clay Products, Ltd., St. Johns, Que.

FORGES

- *Sheldons, Limited, Galt, Ont.

FORGINGS

- Canada Forge Co., Ltd., Welland, Ont.
- *The Steel Co. of Canada, Limited, Hamilton, Ont.

FORGINGS, drop

- *Dominion Forge and Stamping Co., Walkerville, Ont.

FOUNDRY EQUIPMENT

- *Northern Crane Works, Limited, Walkerville, Ont.

FOUNTAIN FRUITS and Juices

- J. J. McLaughlin, Ltd., Toronto.

FRICTION CLUTCH PULLEYS

- *Dodge Mfg. Co., Ltd., Toronto.

FROGS AND CROSSINGS, manganese

- Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

FUEL

- Standard Fuel Co., Toronto.

FUR GARMENTS, men's and women's

- Holt, Renfrew, Ltd., Quebec.

FUR GOODS

- John W. Peck & Co., Limited, Montreal, Que.

FUR TRIMMINGS, ornaments and buttons

- J. Henry Peters Co., 1 Mincing St., Toronto.

FURNACES

- Gurney Foundry Co., Limited, Toronto.
- McClary Mfg. Co., London, Ont.
- The Jas. Smart Mfg. Co., Limited, Brockville, Ont.

FURNACES, hot air

- Bedford Stove Co., Bedford, Que.

FURNITURE, hall

- The George McLagan Furniture Co., Limited, Stratford, Ont.

FURNITURE, house and office

- Canada Furniture Mfrs., Limited, Woodstock, Ont.

FURNITURE, office

- The Canadian Office and School Furniture Co., Ltd., Preston, Ont.

FURNITURE, reed and rattan

- Imperial Rattan Co., Ltd., Stratford, Ont.

FUSE BOXES (Electric)

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

GALVANIZED IRON

- *A. C. Leslie & Co., Montreal.

GALVANIZED SHEETS

- *Dominion Sheet Metal Co., Hamilton, Ont.

GALVANIZERS

- Acme Stamping & Tool Works, Ltd., Hamilton, Ont.
- *Ontario Wind Engine and Pump Co., Limited, Toronto.

GASOLINE ENGINES

- *Ontario Wind & Pump Co., Ltd., Toronto.
- De Laval Dairy Supply Co., Ltd., Peterboro, Ont.

GASOLINE FIRE ENGINES

- *The Watrous Engine Works Co., Ltd., Brantford, Ont.

GASOLINE MOTORS, "Imperial" Marine

- Bruce Stewart & Co., Ltd., Charlottetown, P.E.I.

GASOLINE STORAGE SYSTEMS, special underground

- S. F. Bowser & Co., Toronto.

GASOLINE

- *The Imperial Oil Co., Limited, Toronto.

GEARS, cut

- Hamilton Gear & Machine, Toronto.

GENERATORS

- *Canadian Crocker-Wheeler Co., Ltd., St. Catharines, Ont.
- *Canadian Westinghouse Co., Ltd., Hamilton, Ont.

GINS

- The Melchers Gin & Spirits Distillery Co., Ltd., Montreal, Que.

GLASSWARE

- Dominion Glass Co., Limited, Montreal, Que.

GLASSWARE, cut

- Roden Bros., Ltd., Toronto.

GLASS FOR BUILDINGS

- Toronto Plate Glass Importing Co., Limited, Toronto.

GLASS BENDERS

- Toronto Plate Glass Importing Co., Limited, Toronto.

GLASS, mirror

- Toronto Plate Glass Importing Co., Limited, Toronto.

GLOVES AND MITTS

- *A. R. Clarke & Co., Ltd., Toronto.
- Craig, Cowan Co., Ltd., Toronto.

GLUE

- *Delany and Pettit, Ltd., Toronto.

GOLD-FILLED WIRE AND PLATE

- Canadian Seamless Wire Co., Toronto.

GOLD AND SILVER REFINERS

- Canadian Seamless Wire Co., Toronto.

GRAIN CRUSHERS (Rapid Easy)

- J. Fleury's Sons, Aurora, Ont.

GRAPE JUICE

- J. J. McLaughlin, Ltd., Toronto.

GRATES

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

GRAVITY CARRIERS

- Canadian Mathews Gravity Carrier Co., Limited, Toronto.

GRILLES, metal

- *Canada Wire & Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London, Ont.

GRINDERS, Pedestal and Bench

- *Canadian Hart Wheels, Limited, Hamilton, Ont.

GRINDING and Polishing Machinery

- *Canadian Hart Wheels, Limited, Hamilton, Ont.

GRINDING WHEELS

- *Canadian Hart Wheels, Limited, Hamilton, Ont.

- *The Dominion Abrasive Wheel Co., Limited, New Toronto.

GRINDSTONES

- *Richards-Wilcox Canadian Co., Limited, London, Ont.

GUNN SECTIONAL BOOKCASES

- The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

GUY ANCHORS

- B. J. Coghlin Co., Ltd., Montreal.

GYPSUM, crushed

- *Albert Mfg. Co., Hillsborough, N.B.

GYPSUM PRODUCTS

- *Manitoba Gypsum Co., Ltd., Winnipeg, Man.
- De Laval Dairy Supply Co., Ltd., Peterboro, Ont.

HALL FURNITURE

- The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

HAMS

- F. W. Fearman Co., Ltd., Hamilton, Ont.

HANDLES (Axe, pick, sledge hammers, etc.)

- The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.

HANGERS

- *Dodge Mfg. Co., Ltd., Toronto.
- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

HARDWARE

- *Richards-Wilcox Canadian Co., Limited, London, Ont.
- Taylor-Forbes Co., Limited, Guelph, Ont.
- The Jas. Smart Mfg. Co., Limited, Brockville, Ont.

HARDWOOD FLOORING

- Wilson Bros. Limited, Collingwood, Ont.

HARDWOOD INTERIOR FINISH

- Wilson Bros., Ltd., Collingwood, Ont.

HARDWOOD VENEER DOORS TO DETAIL

- Wilson Bros., Ltd., Collingwood, Ont.

HARNESS

- Lamontagne Ltd., Montreal, Que.

HARRPPON GUY ANCHORS

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

HATS, men's straw

- The Crown Hat Co., Limited, Galt, Ont.

HATS, ladies' and children's straw

- The Crown Hat Co., Limited, Galt, Ont.

HATS, ladies' and children's felt and beaver

- The Crown Hat Co., Limited, Galt, Ont.

HATS, ladies' felt and straw

- Toronto Hat Mfg. Co., Toronto.

HAULAGE, Wire Rope

- The Dominion Wire Rope Co., Ltd., Montreal, Que.

HEATERS

- *Watrous Engine Works Co., Ltd., Brantford, Ont.

HEATERS, feed water

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

HEATING APPLIANCES

- *Sheldons, Limited, Galt, Ont.

HEATING SYSTEMS

- Gurney Foundry Co., Limited, Toronto.

HESSIANS

- The Canadian Bag Co., Limited, Montreal, Que.
- *Scythes & Co., Limited, Toronto.

HINGES

- *The Steel Co. of Canada, Limited, Hamilton, Ont.

HOISTS

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Northern Crane Works, Limited, Walkerville, Ont.

HOISTS, electric and pneumatic

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Northern Crane Works, Limited, Walkerville, Ont.

HOISTING MACHINERY

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Northern Crane Works, Limited, Walkerville, Ont.

HOSE, fire

- *Canadian Consolidated Rubber Co., Limited, Montreal, Que.
- Dunlop Tire & Rubber Goods Co., Limited, Toronto.

HOSE, half, Imperial

- Kingston Hosiery Co., Ltd., Kingston, Ont.

HOSE, rubber

- *Canadian Consolidated Rubber Co., Limited, Montreal, Que.
- Dunlop Tire & Rubber Goods Co., Limited, Toronto.
- *Gutta Percha & Rubber, Limited.

HYDRAULIC PRESSES

- Bawden Machine Co., Limited, Toronto.
- *William R. Perrin, Ltd., Toronto.

ICE CREEPERS

- Parmenter & Bulloch Co., Limited, Gananoque, Ont.

ICE-MAKING MACHINERY

- The Linde Canadian Refrigeration Co., Limited, Montreal, Que.

INCUBATORS & BROODERS

- Lee Mfg. Co., Ltd., Pembroke, Ont.

INDEX CARDS

- Business Systems, Ltd., Toronto.

INJECTORS, automatic and autopoitive

- Penberthy Injector Co., Limited, Windsor, Ont.

INSULATION, patent seamless cork

- *Canadian H. W. Johns-Manville Co., Toronto.

INTERLOCKING RUBBER TILING

- *Dunlop Tire & Rubber Goods Co., Limited, Toronto.
- *Gutta Percha & Rubber Mfg. Co., of Toronto, Limited, Toronto.

INVERTS

- Standard Clay Products, Ltd., St. Johns, Que.

IRON

- *Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

IRON AND STEEL BARS

- *The Steel Co. of Canada, Limited, Hamilton, Ont.

IRON, refined bar

- Starr Mfg. Co., Ltd., Dartmouth, N.S.

IRON PUMPS

- *The Bawden Machine Co., Ltd., Toronto.

IRON STAIRWAYS

- *Canada Wire & Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London, Ont.

IRONWORK, architectural

- *Canada Wire & Iron Goods Co., Hamilton, Ont.

IRONWORK, ornamental

- *Canada Wire & Iron Goods Co., Hamilton, Ont.
- The Western Steel & Iron Co., Ltd., Winnipeg, Man.

IRON, LEAD AND PUTTY

- A. R. Whittall, Montreal, Que.

JAM, canned goods, etc.

- E. D. Smith & Son, Limited.

JAPANS, enamels, etc.

- A. Muirhead Co., Ltd., Toronto.

JOINTERS

- *Berlin Machine Works, Limited, Hamilton, Ont.

JELLY POWDER

- S. H. Ewing & Sons, Montreal, Que.

JEWELRY, enamelled souvenir

- Caron Bros., Montreal, Que.

JEWELRY, gold-filled

- Caron Bros., Montreal, Que.

JOIST HANGERS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

KELSEY WARM AIR GENERATOR

The Jas. Smart Mfg. Co., Limited, Brockville, Ont.

KILNS

*Sheldons, Limited, Galt, Ont.

KINDLING

Standard Fuel Co., Toronto.

KNIFE GRINDERS

*W. H. Banfield & Sons, Toronto.

KNITTED GOODS

*Penman's, Limited, Paris, Ont.

KNIVES

Henry Disston and Sons, Toronto
The Peter Hay Knife Co., Limited, Galt, Ont.
Simonds Canada Saw Co., Limited, Montreal, Que.

KNIVES, pulp and paper

Henry Disston and Sons, Toronto.
The Peter Hay Knife Co., Limited, Galt, Ont.

KODAKS AND PHOTOGRAPHIC SUPPLIES

Canadian Kodak Co., Ltd., Toronto.

LABELS

Lawson & Jones, Ltd., London, Ont.

LABELS, lithographed

Harris Lithographing Co., Toronto.

LACE LEATHER

F. C. McCordick, St. Catharines, Ont.

*Sadler & Haworth, Montreal, Que.

*The D. K. McLaren Belting Co., Limited, Montreal, Que.

*The J. C. McLaren Belting Co., Limited, Montreal, Que.

LADDERS

Stratford Mfg. Co., Ltd., Stratford, Ont.

LADDERS, step.

*Otterville Mfg. Co., Ltd., Otterville, Ont.

LADLES, foundry

*Northern Crane Works, Limited, Walkerville, Ont.

LAGER

E. L. Drewry, Winnipeg, Man.

LARD

F. W. Fearman Co., Ltd., Hamilton, Ont.

LATH

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

LATHE CHUCKS

Ker & Goodwin, Brantford, Ont.

LATHE-DOGS

Canadian Billings & Spencer, Ltd., Welland, Ont.

LAUNCHES

Peterboro Canoe Co., Ltd., Peterboro, Ont.

LAWN MOWERS

Taylor-Forbes Co., Limited, Guelph, Ont.

LAWN SWINGS

Stratford Mfg. Co., Ltd., Stratford, Ont.

LAVATORIES, enameled

Amherst Foundry Co., Limited, Amherst, N.S.

LAUNDRY SINKS

Amherst Foundry Co., Limited, Amherst, N.S.

LEAD

*The Consolidated Mining and Smelting Co. of Canada, Limited, Trail, B.C.

LEAD GRINDERS

Benjamin Moore & Co., Limited, Toronto.

LEAD SHEET

Toronto Plate Glass Importing Co., Limited, Toronto.

LEAD PIPE

*The Steel Co. of Canada, Limited, Hamilton, Ont.

Toronto Plate Glass Importing Co., Limited, Toronto.

*The Canada Metal Co., Toronto.

LEATHER

The Robson Leather Co., Limited, Oshawa, Ont.

LEATHER, bookbinders'

Clarke & Clarke, Ltd., Toronto.

LEATHER, fancy

Clarke & Clarke, Ltd., Toronto.

LEATHER GOODS

Lamontagne, Ltd., Montreal, Que.

LEATHER, hemlock sole

The Breithaupt Leather Co., Ltd., Berlin, Ont.

LEATHER, patent colt and side leather

*A. R. Clarke & Co., Ltd., Toronto.

LEATHER, sheep skin, etc.

Clarke & Clarke, Ltd., Toronto.

LEATHER, upholstering

Clarke & Clarke, Ltd., Toronto.

LEATHER, upper

A. Davis & Son, Ltd., Kingston, Ont.

LINK BELTING

*The Dodge Mfg. Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

LINOLEUM

Dominion Oil Cloth Co., Limited, Montreal, Que.

LITHOGRAPHED BUSINESS STATIONERY

Business Systems, Ltd., Toronto.

LITHOGRAPHED TIN WARE

*MacDonald Mfg. Co., Limited, Toronto.

LITHOGRAPHERS

American Bank Note Company, Ottawa, Ont.

Harris Lithographing Co., Toronto.

*Montreal Lithographing Co., Montreal, Que.

Stone, Limited, Toronto.

Rolph & Clark, Limited, Toronto.

LOCKERS

*Canada Wire & Iron Works Co., Hamilton, Ont.

*Dennis Wire & Iron Works Co., London, Ont.

*Geo. B. Meadows, Wire, Iron and Brass Works Co., Toronto.

LOCOMOTIVE BLOCKS

Standard Clay Products, Limited, St. Johns, Que.

LOCOMOTIVES, industrial

*Montreal Locomotive Works, Ltd., Montreal, Que.

LOCOMOTIVE & MARINE BRASS WORKS

The James Morrison Brass Mfg. Co., Limited, Toronto.

LOOSE LEAF, BINDERS AND FORMS

Business Systems, Ltd., Toronto.

LOOSE LEAF SYSTEMS

Copeland-Chatterson Co., Limited, Toronto.

LOOSE LEAF SUPPLIES

The Esdale Press, Ltd., Edmonton.

LUBRICATORS, steam sight feed

Penberthy Injector Co., Limited, Windsor, Ont.

LUGS, for silos and water tanks

*Otterville Mfg. Co., Ltd., Otterville, Ont.

LUMBER

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

G. & J. Esplen, Montreal, Que.

LUMBER, asbestos

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

LUMBERING BLANKETS

Slingsby Mfg. Co., Ltd., Brantford, Ont.

LUMBER, red pine and spruce

Gillies Bros., Ltd., Braeside, Ont.

LUMBER, spruce, fir, larch and cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

LUMBER, white pine

Gillies Bros., Ltd., Braeside, Ont.

MACHINE TOOLS

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, conveying

Canadian Mathews Gravity Carrier Co., Limited, Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

MACHINERY, elevating

Canadian Mathews Gravity Carrier Co., Limited, Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

MACHINERY, flour mill

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

MACHINERY, grinding

*Canadian Hart Wheels, Limited, Hamilton, Ont.

MACHINERY, hoisting, etc.

*Polson Iron Works, Limited, Toronto.

J. & R. Weir, Montreal, Que.

*M. Beatty & Sons, Ltd., Welland, Ont.

*Northern Crane Works, Limited, Walkerville, Ont.

MACHINERY, ice cream

J. J. McLaughlin, Ltd., Toronto.

MACHINERY, iron working

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, pulp mill

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, pumping

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, punching and shearing

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, railroad and car shop

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, roadmaking

Sawyer-Massey Co., Limited, Hamilton, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, sawmill

The E. Long Mfg. Co., Limited, Orillia, Ont.

P. Payette & Co., Pentanguishene, Ont.

W. P. Plant, Hastings, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, special

Bawden Machine Co., Limited, Toronto.

MACHINERY, tannery

W. P. Plant, Hastings, Ont.

MACHINERY, transmission

*Dodge Mfg. Co., Ltd., Toronto.

*Goldie & McCulloch Co., Limited, Galt, Ont.

MACHINERY, wood working

*Berlin Machine Works, Limited, Hamilton, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINE WRENCHES

*Canadian Billings & Spencer, Ltd., Welland, Ont.

MACHINES, painting

Spramotor Co., London, Ont.

MAGNESITE

Canadian Carbonate Co., Limited, Montreal, Que.

MALT

*Hiram Walker & Sons, Limited, Walkerville, Ont.

MAPS AND MAP MOUNTING

The Geo. M. Hendry Co., Limited, Toronto.

Stone, Limited, Toronto.

MARTINGALE RINGS AND SLIDE LOOPS

The Arlington Co. of Canada, Ltd., Toronto.

MATCHERS

*Berlin Machine Works, Limited, Hamilton, Ont.

MATCHES

*The E. B. Eddy Co., Ltd., Hull.

MEATS, canned

The Wm. Davies Co., Ltd., Toronto.

MECHANICAL STOKERS

*Hare Engineering Co., Limited, Toronto.

*The Jones Underfeed Stoker Co., Ltd., Toronto.

MEDICINES, patented and pharmaceutical

Dr. Ed. Morin & Cie., Ltd., Quebec.

METAL, babbitt

*Canada Metal Co., Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

Alonzo W. Spooner, Limited, Port Hope, Ont.

METAL CEILING

*Metallic Roofing Co., Limited, Toronto.

*Pedlar People, Ltd., Oshawa, Ont.

METAL PACKING

*Garlock Packing Company, Hamilton, Ont.

METAL ROOFING

*Pedlar People, Ltd., Oshawa, Ont.

*Metallic Roofing Co., Limited, Toronto.

The Booth-Coulter Copper and Brass Co., Limited, Toronto.

METAL SHINGLES

*The Metallic Roofing Co. of Canada, Limited, Toronto.

*Pedlar People, Ltd., Oshawa, Ont.

METAL SIDING

*The Metallic Roofing Co., Ltd., Toronto.

*Pedlar People, Ltd., Oshawa, Ont.

MILK BOTTLE CAPS

Business Systems, Ltd., Toronto.

MILK DEALERS' MACHINERY AND SUPPLIES

De Laval Dairy Supply Co., Ltd., Montreal, Que.

MILLBOARD, asbestos

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

MILLING CUTTERS

Pratt and Whitney Company of Canada, Dundas, Ont.

MITTS AND GLOVES (Indian, tan, red deerskins)

Holt, Renfrew Ltd., Quebec, Que.

A. R. Clarke & Co., Ltd., Toronto.

MOCCASINS AND SLIPPERS (Indian tanned leathers)

Holt, Renfrew Ltd., Quebec, Que.

MORTISERS

*Berlin Machine Works, Limited, Hamilton, Ont.

MOTORS

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines, Ont.

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

MOTORS, electric (alternating current)

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

Consolidated Electric Co., Limited, Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines, Ont.

MOTORS, electric (direct current)

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

Consolidated Electric Co., Limited, Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

MOTORS, electric (repairing)

Consolidated Electric Co., Limited, Toronto.

MOULDERS

*Berlin Machine Works, Limited, Hamilton, Ont.

NAILS

*The Steel Co. of Canada, Limited, Hamilton, Ont.

NAILS, copper

Parmenter and Bulloch Co., Ltd., Gananoque, Ont.

NAILS, wire

Parmenter and Bulloch Co., Ltd., Gananoque, Ont.

The Graham Nail Works, Toronto.

NAPHTHA

*The Imperial Oil Co., Limited, Toronto.

NICKEL OXIDE

Coniagas Reduction Co., Limited, St. Catharines, Ont.

NUTS

*John Morrow Screw & Nut Co., Limited, Ingersoll, Ont.

*The National Acme Mfg. Co., Montreal, Que.

*The Steel Co. of Canada, Limited, Hamilton, Ont.

OAKUM, plumbers, Canadian Navy

Factory Waste and Metal Co., Montreal, Que.

*Scythes & Co., Ltd., Toronto.

OAT CRUSHERS AND FLAKERS
J. Fleury's Sons, Aurora, Ont.

OFFICE STATIONERY

*The Montreal Lithographing Co., Limited, Montreal, Que.

OILS

Brandram-Henderson, Ltd., Montreal, Que.
A. Ramsay & Son Co., Montreal, Que.
Sherwin-Williams Co. of Canada, Limited, Montreal, Que.

OIL FILTRATION AND CIRCULATING SYSTEMS

S. F. Bowser & Co., Toronto.

OILERS AND OIL STOVES

Sheet Metal Products Co. of Canada, Limited, Toronto.

OIL STORAGE SYSTEMS, self-measuring

S. F. Bowser & Co., Toronto.

OIL COMPANIES

Commercial Oil Co., Ltd., Hamilton, Ont.

OILS (Petroleum products)

*British American Oil Co., Limited, Toronto.
*The Imperial Oil Co., Limited, Toronto.

OILS, road

*Paterson Manufacturing Company, Toronto and Montreal.

OILCLOTHS, floor and table

Dominion Oil Cloth Co., Limited, Montreal, Que.

OFFICE DESKS

*Goderich Organ Co., Goderich, Ont.

ORGANS

*Goderich Organ Co., Goderich, Ont.
Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.
Thomas Organ & Piano Co., Woodstock, Ont.

ORGANS, pipe

Casavant Freres, St. Hyacinthe, Que.
Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

ORGANS, parlor

*Goderich Organ Co., Goderich, Ont.

ORNAMENTAL IRON WORK

*Canada Wire & Iron Goods Co., Hamilton, Ont.
*Dennis Wire & Iron Works Co., London, Ont.
*The Geo. B. Meadows, Toronto Iron and Brass Goods Works Co., Limited, Toronto.

OVENS, portable bake

Bedford Stove Co., Bedford, Que.
Mackenzie & Co., Ottawa, Ont.
Peerless Overall Co., Rock Island, Que.
Walker Pant and Shirt Co., Walkerville and Chatham, Ont.
The Standard Shirt Co., Limited, Montreal, Que.

OVERCOATINGS

Rosamond Woollen Co., Almonte, Ont.

OVERHEAD RUNWAYS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

PACKING BOXES

Barchard & Co., Limited, Toronto.

PACKING, engine

*Garlock Packing Co., Hamilton.

PACKING, rubber

*Canadian Consolidated Rubber Co., Limited, Montreal, Que.
Dunlop Tire & Rubber Goods Co., Limited, Toronto.
*Gutta Percha & Rubber, Limited, Jenkins Bros., Ltd., Montreal, Que.

PAIS AND TUBS, wooden

The C. Beck Mfg. Co., Limited, Penetanguishene, Ont.

PAINTERS' SUPPLIES

A. Muirhead Co., Ltd., Toronto.

PAINTS

R. C. Jamieson & Co., Limited, Montreal, Que.

PAINTS and VARNISHES

A. Muirhead Co., Ltd., Toronto.
Benjamin Moore & Co., Limited, Toronto.
Standard Paint & Varnish Co., Ltd., Windsor, Ont.
The Imperial Varnish & Color Co., Limited, Toronto.
The Staneland Co., Ltd., Victoria, B.C.
A. Ramsay & Sons Co., Montreal, Que.
Sherwin-Williams Co. of Canada, Limited, Montreal, Que.
*The Dougall Varnish Co., Limited, Montreal, Que.
Standard Paint Co. of Canada, Limited, Montreal, Que.

PAINTS, barn and bridge

Standard Paint & Varnish Co., Ltd., Windsor, Ont.
Sherwin-Williams Co. of Canada, Limited, Montreal, Que.

PAINTS, preservative

Standard Paint Co. of Canada, Limited, Montreal, Que.
*Paterson Manufacturing Company, Toronto and Montreal.

PANELBOARDS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PAPER BOARDS

Bathurst Lumber Co., Limited, Bathurst, N.B.

PAPER, book

Barber Paper & Coating Mills, Ltd., Georgetown, Ont.

PAPER BOXES

King Paper Box Co., Ltd., Montreal, Que.
*Rudd Paper Box Co., Limited, Toronto.

PAPERS, bond

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, envelope

Provincial Paper Mills Limited, Georgetown, Ont.
The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER KRAFT, wrapping printing and waterproof

*Beveridge Paper Co., Ltd., Montreal, Que.

PAPER, news

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPER, wrapping

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPERS, building

Bathurst Lumber Co., Ltd., Bathurst, N.B.
*The Riordon Pulp and Paper Co., Montreal, Que.
Standard Paint Co. of Canada, Ltd., Montreal, Que.

PAPER, coated, book and label

*Ritchie & Ramsay, Ltd., Toronto.
Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, coated cover

*Ritchie & Ramsay, Ltd., Toronto.
Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, coated box board

*Ritchie & Ramsay, Ltd., Toronto.
Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, enamelled blotting

*Ritchie & Ramsay, Ltd., Toronto.
Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, gummed tapes

Gummed Papers, Ltd., Brampton, Ont.

PAPER, label

Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, ledger

*Rolland Paper Co., Limited, Montreal, Que.

The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER, super-book

The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER, wall

Stauntons, Ltd., Toronto.

PAPER, writing

The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER, writing, high-grade

*Rolland Paper Co., Limited, Montreal, Que.

PAPER, writing, superfine

*Rolland Paper Co., Limited, Montreal, Que.

PARK SEATS

Stratford Mfg. Co., Ltd., Stratford, Ont.

PARLOR SUNDRIES

The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

PATENTS

Fetherstonhaugh & Co., Toronto.
Ridout and Maybee, Toronto.

PATENT LITIGATION

Ridout and Maybee, Toronto.

PAY ROLL AUDITS

*International Time Recording Co. of Canada, Ltd., Toronto.

PEAS AND BEANS FOR SEED

W. P. Niles, Ltd., Wellington, Ont.

PERFORATED METALS

*Canada Wire & Iron Goods Co., Hamilton, Ont.

PERFORATED MUSIC ROLLS

The Otto Higel Co., Ltd., Toronto.

PERFUMES AND TOILET PREPARATIONS

Sovereign Perfumes Ltd., Toronto.

PETROLEUM PRODUCTS

*The Imperial Oil Co., Limited, Toronto.

PHOTOMAILERS

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

PIANOS

Dominion Organ & Piano Co., Ltd., Bowmanville, Ont.
*Gourlay, Winter and Leeming, Toronto.
Karn-Morris Piano and Organ Co., Limited, Woodstock, Ont.

PIANO ACTIONS

The Otto Higel Co., Ltd., Toronto.

PIANO KEYS

The Otto Higel Co., Ltd., Toronto.

PIANOS, player

*Gourlay, Winter and Leeming, Toronto.
Karn-Morris Piano and Organ Co., Limited, Woodstock, Ont.

PIANO, player actions

The Otto Higel Co., Ltd., Toronto.

PIANO STOOLS AND BENCHES

*Goderich Organ Co., Goderich, Ont.

PICKLES

The Wm. Davies Co., Ltd., Toronto.

PICKLES AND CATSUPS

T. A. Lytle Co., Ltd., Toronto.

PIG IRON

*The Steel Co. of Canada, Limited, Hamilton, Ont.

PINE DOORS, SASH, MOULDINGS, ETC.

Wilson Bros., Limited, Collingwood, Ont.

PINS, society, emblems and badges

Caron Bros., Montreal, Que.

PIPE, cast iron, for water and gas

National Iron Works, Ltd., Toronto.

PIPE COUPLINGS

*The Steel Co. of Canada, Limited, Hamilton, Ont.

PIPE COVERINGS

*Eureka Mineral Wood & Asbestos Co., Toronto.

PIPE ORGANS

Karn-Morris Piano and Organ Co., Limited, Woodstock, Ont.

PIPES, culvert

Standard Clay Products, Ltd., St. Johns, Que.

PIPE AND NIPPLES, black and galvanized

*Canadian Tube & Iron Co., Ltd., Montreal, Que.

PIPE, sewer

Hamilton and Toronto Sewer Pipe Co., Limited, Hamilton, Ont.
Standard Clay Products, Ltd., St. Johns, Que.

PIPE, soil and fittings

Warden King Lt., Montreal, Que.

PIPE AND TUBES, wrought

*Page-Hersey Iron Tube and Lead Co., Ltd., Toronto.

PIPE, threading and cutting off machines

John H. Hall & Sons, Limited, Brantford, Ont.

PISTON RODS

*The Canadian Drawn Steel Co., Limited, Hamilton, Ont.
*Union Drawn Steel Co., Limited, Hamilton, Ont.

PLANERS

*Berlin Machine Works, Limited, Hamilton, Ont.

PLANING MILLS

G. & J. Esplen, Montreal, Que.

PLASTER OF PARIS

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, hard wall

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, land

*Albert Mfg. Co., Hillsborough, N.B.

PLAYING CARDS

*The Montreal Lithographing Co., Limited, Montreal, Que.

PLOWS

J. Fleury's Sons, Aurora, Ont.

PLUMBERS' SUPPLIES

The Garth Co., Montreal, Que.
The James Morrison Brass Mfg. Co., Ltd., Toronto.

PLUMBING APPLIANCES

Standard Sanitary Mfg. Co., Ltd., Limited, Toronto.

PLUMBING SUPPLIES

Toronto Plate Glass Importing Co., Limited, Toronto.

POLE LINE MATERIAL (wooden insulator top pins, side blocks, pole steps, cross arms)

The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.

POLES, curtain

Daly & Morin, Montreal, Que.

POLES, telegraph and telephone, cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

PORCELAIN INSULATORS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PORK PACKERS AND CHEESE EXPORTERS

The Ingersoll Packing Co., Limited, Ingersoll, Ont.

POSTS, split cedar fence

Fernie Lumber Co., Ltd., Fernie, B.C.

POSTERS

Stone, Limited, Toronto.

POULTRY SUPPLIES AND MEDICINES

Lee Mfg. Co., Ltd., Pembroke, Ont.

POWDER, blasting

Canadian Explosives, Ltd., Montreal, Que.

POWER PRESSES

*Canadian Boomer & Boschert Press Co., Limited, Montreal, Que.
*William R. Perrin, Ltd., Toronto.

PRESSES, baling

*Canadian Boomer & Boschert Press Co., Ltd., Montreal, Que.
*William R. Perrin, Ltd., Toronto.

PRESSES, filter

*Canadian Boomer & Boschert Press Co., Ltd., Montreal, Que.

PRESSES, hydraulic

*Canadian Boomer & Boschert Press Co., Limited, Montreal, Que.

PRESSES, veneer

*William R. Perrin, Ltd., Toronto.
*Canadian Boomer & Boschert Press Co., Ltd., Montreal, Que.

PRINTED BUSINESS STATIONERY

Business Systems, Ltd., Toronto.

PRINTERS

Rous & Mann, Ltd., Toronto.
R. G. McLean, Toronto.

PRINTERS, catalogue

R. G. McLean, Toronto.

PRINTING AND LITHOGRAPHING

Lawson & Jones, Limited, London, Ont.

PRODUCE

The Wm. Davies Co., Ltd., Toronto.

PROVISIONS

The Wm. Davies Co., Ltd., Toronto.

PULLEYS

*Dodge Mfg. Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.

PULP AND PAPER MAKERS' FELTS

Ayers Limited, Lachute Mills, P.Q.

PULP, bleached sulphite

The Edward Partington Pulp and Paper Co., St. John, N.B.

PULP, sulphide

Bathurst Lumber Co., Ltd., Bathurst, N.B.

PUMPS

Spramotor Co., London, Ont.
*Canadian Fairbanks-Morse Company, Limited, Montreal, Que.
*Bawden Machine Co., Ltd., Toronto.

PUMPS, ammonia

*Bawden Machine Co., Ltd., Toronto.

PUMPS, boiler feed

*Bawden Machine Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.

PUMPS, centrifugal

*M. Beatty & Sons, Ltd., Welland, Ont.
*Waterous Engine Works Co., Ltd., Brantford, Ont.

PUMPS, iron

*Goold-Shapley-Muir Co., Limited, Brantford, Ont.
*Waterous Engine Works Co., Ltd., Brantford, Ont.

PUMPS, tar

*Bawden Machine Co., Ltd., Toronto.

PUMPS, turbine, and equipment

*Bawden Machine Co., Ltd., Toronto.

PUMPS (Turbine and reciprocating)

John McDougall, Caledonian Iron Works Co., Ltd., Montreal, Que.

PYJAMAS AND NIGHT ROBES

Williams, Greene & Rome, Berlin, Ont.

RADIATORS

Taylor-Forbes Co., Limited, Guelph, Ont.
Warden King, Ltd., Montreal, Que.

RAILINGS, brass and iron

*Dennis Wire & Iron Works Co., London, Ont.

RAILWAY SIGNAL APPLIANCES

General Railway Signal Co. of Canada, Ltd., Montreal, Que.

RAILWAY SUPPLIES

*Canadian Steel Foundries, Ltd., Montreal, Que.
*Chicago Bridge & Iron Works, Bridgeburg, Ont.
B. J. Coghlin Co., Ltd., Montreal, Que.

RAILWAY TARIFF BINDERS

The Esdale Press Ltd., Edmonton.

READY-TO-WEAR GARMENTS, LADIES'

H. C. Boulter Co., Ltd., Toronto.

REAMERS

Pratt and Whitney Co. of Canada, Dundas, Ont.
*Butterfield & Co., Rock Island, P.Q.

"REDWOOD" lager

E. L. Drewry, Winnipeg, Man.

REED AND RATTAN GOODS

Canada Furniture Mfgs., Limited, Woodstock, Ont.

REFRIGERATORS

Sanderson-Harold Co., Ltd., Paris, Ont.
Lee Mfg. Co., Ltd., Pembroke, Ont.

REFRIGERATING MACHINERY

The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

REFRIGERATORS, store, homes and institutions

Ham & Nott Co., Ltd., Brantford, Ont.
John Hillock & Co., Ltd., Toronto.

REINFORCEMENT BARS

*The Steel Co. of Canada, Limited, Hamilton, Ont.

REINFORCEMENT for concrete

*Canada Wire & Iron Goods Co., Hamilton, Ont.
*Pedlar People, Ltd., Oshawa, Ont.

RINGS, gold

Caron Bros., Montreal, Que.

RIVETS

*Canadian Tube & Iron Co., Ltd.,
*The Steel Co. of Canada, Limited, Hamilton, Ont.

RIVETS, bifurcated and tubular

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

RIVETS AND BURS, iron, copper and brass

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

ROLLERS, shade

Daly & Morin, Montreal, Que.

ROOFING, metal

*Metallic Roofing Co., Limited, Toronto.

ROOFING, ready to lay

*Canadian H. W. Johns-Manville Co., Toronto.
Standard Paint Co. of Canada, Ltd., Montreal, Que.
*Paterson Mfg. Co., Toronto and Montreal.

ROOF TRUSSES

*The Canadian Bridge Co., Ltd., Walkerville, Ont.
*Dominion Bridge Co., Ltd., Montreal, Que.

ROPE

*Doon Twines Ltd., Doon, Ont.

ROPE, cotton

Hamilton Cotton Co., Hamilton, Ont.

RUBBER FOOTWEAR

Ames Holden, McCready, Limited, Montreal, Que.
*Gutta Percha & Rubber, Ltd.,
The Miner Rubber Co., Limited, Granby, Que.

RUBBER GOODS

*Canadian Consolidated Rubber Co., Limited, Montreal, Que.
*Gutta Percha & Rubber, Ltd.,
*Dunlop Tire & Rubber Goods Co., Limited, Toronto.

RUBBER MOULDS

Bawden Machine Co., Ltd., Toronto.

RUBBER PACKING

*Garlock Packing Company, Hamilton, Ont.

RULES

The Lufkin Rule Co. of Canada, Ltd., Windsor, Ont.

RYE

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

SADDLERY HARDWARE

*Dominion Forge and Stamping Co., Walkerville, Ont.

SAFES

*Goldie & McCulloch Co., Limited, Galt, Ont.

SAMPLE CASES

The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.
J. Eveleigh & Co., Ltd., Montreal, Que.

SANDERS

*Berlin Machine Works, Limited, Hamilton, Ont.

SANDPAPER

*Delany and Pettit, Ltd., Toronto.

SASH CORD, cotton

Hamilton Cotton Co., Hamilton, Ont.

SALT

Canadian Salt Co., Ltd., Windsor, Ont.

SANITARY PAPER TOWELS

*E. B. Eddy Co., Ltd., Hull, Que.

SAW SHARPENING MACHINERY

*Canadian Hart Wheels, Limited, Hamilton, Ont.

SAWS

Henry Disston & Sons, Limited, Toronto.
Shurly & Deitrich, Galt, Ont.

SAWS, band

*Berlin Machine Works, Limited, Hamilton, Ont.

SAWS, crosscut

*Berlin Machine Works, Limited, Hamilton, Ont.

SAWS, crosscut and band

Shurly & Deitrich, Galt, Ont.

SAWS, circular mill

Shurly & Deitrich, Galt, Ont.

SAWS, hack

*Victor Saw Works, Ltd., Hamilton, Ont.

SAWS, of all kinds

Simonds Canada Saw Co., Limited, Montreal, Que.

SAWS, rip

*Berlin Machine Works, Limited, Hamilton, Ont.
Shurly & Deitrich, Galt, Ont.

SAWMILLS

G. & J. Esplen, Montreal, Que.
*The Waterous Engine Works Co., Ltd., Brantford, Ont.

SAWS, specialties

*Victor Saw Works, Ltd., Hamilton, Ont.

SCALES

The Gurney Scale Co., Hamilton, Ont.

SCALES, counter

The Gurney Scale Co., Hamilton, Ont.

SCALES, railway track, etc.

The Gurney Scale Co., Hamilton, Ont.

SCREENS

*Canada Wire & Iron Goods Co., Hamilton, Ont.

SCREEN DOORS AND WINDOWS

Sanderson-Harold Co., Ltd., Paris, Ont.
Ham & Nott Co., Ltd., Brantford, Ont.

SCREWS

*John Morrow Screw & Nut Co., Ltd., Ingersoll, Ont.
*The National Acme Mfg. Co., Montreal, Que.
*The Steel Co. of Canada, Limited, Hamilton, Ont.

SCREW PLATES

*Butterfield & Co., Rock Island, P.Q.

SECURITIES, engraved

American Bank Note Co., Ottawa, Ont.

SERGES

Rosamond Woollen Co., Almonte, Ont.

SHAFTING

Canada Forge Co., Ltd., Welland, Ont.
*Canadian Drawn Steel Co., Ltd., Hamilton, Ont.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.
*Union Drawn Steel Co., Limited, Hamilton, Ont.
*Dodge Mfg. Co., Ltd., Toronto.

SHANTY BLANKETS

Slingsby Mfg. Co., Ltd., Brantford, Ont.

SHAPERS

*Berlin Machine Works, Limited, Hamilton, Ont.

SHEAR BLADES, iron

The Peter Hay Knife Co., Limited, Galt, Ont.

SHEATHING

*Paterson Mfg. Co., Toronto and Montreal.

SHEATHING, asbestos corrugated

*Eureka Mineral Wool & Asbestos Co., Toronto.

SHEET METAL WARE (iron, galvanized and enamelled)

Sheet Metal Products Co. of Canada, Limited, Toronto.

SHEET METAL STAMPINGS

Acme Stamping & Tool Works, Ltd., Hamilton, Ont.

SHELLAC

*Berry Bros., Ltd., Winnipeg, Man.

SHINGLES, asbestos cement

*Canadian H. W. Johns-Manville Co., Toronto.

SHIRTS

MacKenzie & Co., Ottawa, Ont.
Williams, Greene & Rome, Berlin, Ont.
Peerless Overall Co., Rock Island, Que.
John W. Peck & Co., Ltd., Montreal, Que.

SHIRTS, workmen's

*A. R. Clarke & Co., Ltd., Toronto.

SHOE PEGWOOD

O. Chalifour, Quebec, Que.

SHOE LININGS

Galt Knitting Co., Ltd., Galt, Ont.

SHOES, running and athletic

Ames-Holden-McCready, Ltd., Montreal, Que.

SHOOKS

Barchard & Co., Ltd., Montreal, Que.

SILVER BULLION

Coniagass Reduction Co., Ltd., St. Catharines, Ont.

SILVERWARE

Toronto Silver Plate Co., Limited, Toronto.

SILVERSMITH

Canadian Wm. A. Rogers, Ltd., Toronto.
Standard Silver Co., Toronto.

SILVERWARE, sterling

Roden Bros., Limited, Toronto.

SINKS, enamelled

Amherst Foundry Co., Limited, Amherst, N.S.

SKATES, figure

Canada Cycle and Motor Co., Ltd., Toronto.

SKATES, genuine Acme

Canada Cycle and Motor Co., Ltd., Toronto.

SKATES, hockey

Canada Cycle and Motor Co., Ltd., Toronto.

SKATES, ice

Canada Cycle and Motor Co., Ltd., Toronto.

SKIFFS

Peterboro Canoe Co., Ltd., Peterboro, Ont.

SKYLIGHTS

*Metallic Roofing Co., Limited, Toronto.
*Pedlar People, Ltd., Oshawa, Ont.

SLEIGHS

Tudhope-Anderson Co., Limited, Orillia, Ont.

SLIPPERS

Ames-Holden-McCready, Ltd., Montreal, Que.

SMOKE CONSUMERS

*The Jones Underfeed Stoker Co., Ltd., Toronto.

SOAPS

J. Barsalou & Co., Ltd., Montreal, Que.

SOAP (soft, oil)

The Imperial Varnish & Color Co., Ltd., Toronto.
Sherwin-Williams Co. of Canada, Limited, Montreal, Que.

SODA WATER FOUNTAINS

J. J. McLaughlin, Ltd., Toronto.

SOIL PIPE

Anthes Foundry, Ltd., Toronto.

SOLDER

Alonso W. Spooner, Ltd., Port Hope, Ont.
*Canada Metal Co., Toronto.

SOLDER, silver

Geo. H. Lees & Co., Hamilton.

SOLDER, wire and bar

*American Can Co., Montreal, and Hamilton.

SNOWSHOES

Holt, Renfrew, Ltd., Quebec, Que.

SPARK PLUGS

Canadian Carbon Co., Limited, Toronto.

SPIRAL CONVEYORS

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.
*The Goldie & McCulloch Co., Ltd., Galt, Ont.

SPLIT PEAS

H. Murton, Guelph, Ont.

SPIKES, railway and marine

Starr Mfg. Co., Ltd., Dartmouth, N.S.

SPIRITS

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

*Hiram Walker & Sons, Limited, Walkerville, Ont.

SPORTING MEDALS AND TROPHIES

Roden Bros., Limited, Toronto.

SPRAYERS

Spramotor Co., London, Ont.

SPRING COTTERS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

SPRINGS

*Canadian Steel Foundries, Ltd., Montreal, Que.

B. J. Coghlin Co., Ltd., Montreal, Que.

Guelph Spring & Axle Co., Ltd., Guelph, Ont.

SPRINGS, carriage and automobile

Guelph Spring and Axle Co., Ltd., Guelph, Ont.

SPRINKLER SYSTEMS

*Chicago Bridge & Iron Works, Bridgeburg, Ont.

*General Fire Equipment Co., Ltd., Toronto.

*Purdy, Mansell, Ltd., Toronto.

*Vogel Co. of Canada, Ltd., Montreal, Que.

STAINS

R. C. Jamieson & Co., Ltd., Montreal, Que.

STAINS, creosote shingle

A. Muirhead Co., Ltd., Toronto.

STAMPINGS

*Dominion Forge and Stamping Co., Ltd., Walkerville, Ont.

STAMPS, steel, brass and rubber

Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

STAMP MILLS

*Jenckes Machine Co., Sherbrooke.

STATIONERY, office

Harris Lithographing Co., Toronto.

STEAM PIPE AND BOILER COVERINGS, asbestos

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

STEAM SHOVELS

*M. Beatty & Sons, Ltd., Welland, Ont.

STEAM SPECIALTIES

*Sheldons, Ltd., Galt.

STEAM TRAPS

*Canadian Sirocco Co., Windsor, Ont.

*Canadian Morehead Manufacturing Co., Limited, Woodstock.

STEEL

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

STEEL BILLETS AND BLOOMS

*The Steel Company of Canada, Limited, Hamilton.

STEEL BUILDINGS

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*Dominion Bridge Co., Ltd., Montreal.

*Pedlar People, Ltd., Oshawa, Ont.

STEEL CASTINGS

*Canadian Steel Foundries, Ltd., Montreal, Que.

*Dominion Steel Foundry Co., Ltd., Hamilton.

STEEL PEN STOCKS

*Jenckes Machine Co., Sherbrooke.

STEEL RODS

*The Steel Co. of Canada, Ltd., Hamilton.

STEEL SASH

*Dennis Wire & Iron Works Co., London.

*Henry Hope & Sons, Ltd., Toronto.

STEEL SHELVING

*Dennis Wire & Iron Works Co., London.

STEEL WIRE RODS

*The Steel Company of Canada, Limited, Hamilton.

TELEPHONE ACCESSORIES

*Northern Electric Co., Limited, Montreal.

STENCILS, brass

Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

STEREOTYPING

Central Press Agency, Toronto

STOKERS

*Hare Engineering Co., Limited, Toronto.

*The Jones Underfeed Stoker Co., Ltd., Toronto.

STOOLS AND BENCHES, piano and organ

*Otterville Mfg. Co., Ltd., Otterville, Ont.

STONE

The Corinthian Stone Co., Guelph, Ont.

The Hagersville Contracting Co., Hagersville, Ont.

STORE FITTINGS

The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

STOVES

Tudhope-Anderson Co., Limited, Orillia, Ont.

Bedford Stove Co., Bedford, Que.

STOVE BOARDS

Sheet Metal Products Co. of Canada, Ltd., Toronto.

STOVE LININGS

Standard Clay Products, Ltd., St. Johns, Que.

STOVES AND RANGES

Bedford Stove Co., Bedford, Que.

Gurney Foundry Co., Ltd., Toronto.

Lee Mfg. Co., Ltd., Pembroke, Ont.

The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

McClary Mfg. Co., London, Ont.

STRETCHERS, lace curtain

*Otterville Mfg. Co., Ltd., Otterville, Ont.

STRUCTURAL STEEL

Dominion Bridge Co., Montreal.

*Hamilton Bridge Works Co., Ltd., Hamilton.

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*The Structural Steel Co., Ltd., Montreal.

SUIT CASES

J. Eveleigh & Co., Ltd., Montreal.

The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.

SURFACERS

*Berlin Machine Works, Ltd., Hamilton.

SWITCHBOARDS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

SWITCHES (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

SWITCHES, railway

Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

SWITCHES AND FROGS

*Canadian Steel Foundries, Ltd., Montreal, Que.

SWITCH STANDS

Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

TABLES, billiard

Samuel May & Co., Toronto.

TABLE COVERS, chenille

Hamilton Cotton Co., Hamilton, Ont.

TAGS, shipping and factory

Business Systems, Ltd., Toronto.

TANKS

Chicago Bridge & Iron Works, Bridgeburg, Ont.

Goold-Shapley-Muir Co., Ltd., Brantford, Ont.

*Ontario Wind Engine & Pump Co., Ltd., Toronto.

*The Goldie & McCullough Co., Ltd., Galt.

*The Watrous Engine Works Co., Ltd., Brantford.

TANNERS' SUPPLIES

McClary Mfg. Co., London, Ont.

TAPS

Pratt and Whitney Co. of Canada, Dundas, Ont.

*Butterfield & Co., Rock Island, P.Q.

TAP WRENCHES

*Butterfield & Co., Rock Island, P.Q.

TAPES, measuring

The Lufkin Rule Co., of Canada, Ltd., Windsor, Ont.

TAPES, paper and cloth, gummed and ungummed

Gummed Papers, Ltd., Brampton.

TELEPHONE ACCESSORIES

*Northern Electric Co., Limited, Montreal, Que.

TENTS

Mackenzie & Co., Ottawa, Canada.

Turner, J. J., & Sons, Peterboro, Ont.

*Scythes & Co., Ltd., Toronto.

TERRA ALBA

*Albert Mfg. Co., Hillsborough, N.B.

TERRA COTTA (architectural)

Toronto Plate Glass Importing Co., Ltd., Toronto.

TEXTILE SUPPLIES (shuttles, bobbins, spools and picker sticks.)

The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.

THEATRE CURTAINS, asbestos

*Canadian H. W. Johns-Manville Co., Toronto.

THUMB SCREWS

*Canadian Billings & Spencer, Ltd., Welland.

TILING, interlocking rubber

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber, Ltd.

TIME RECORDERS

*International Time Recording Co. of Canada, Ltd., Toronto.

TIN WARE (stamped, pierced, japanned and lithographed)

Sheet Metal Products Co. of Canada, Ltd., Toronto.

TIRES, cycle, auto and truck

Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

*Gutta Percha & Rubber, Ltd.

TRADE MARKS AND DESIGNS

Ridout & Maybee, Toronto.

TRANSFORMERS

*The Canadian Crocker-Wheeler Co., Limited, St. Catharines.

TOOLS, track

B. J. Coghlin Co., Ltd., Hamilton, Ont.

TRANSMISSION MACHINERY

*Dodge Mfg. Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*The Watrous Engine Works Co., Ltd., Brantford.

TROLLEYS

*Richard-Wilcox Canadian Co., Limited, London, Ont.

*Northern Crane Works, Limited, Walkerville.

TRUCKS

The Gurney Scale Co., Hamilton, Ont.

*The Canadian Sirocco Co., Ltd., Windsor, Ont.

*Northern Crane Works, Limited, Walkerville.

TRUCKS, brick, tile and lumber

*Watrous Engine Works Co., Ltd., Brantford.

TRUCKS, motor

*National Steel Car Co., Limited, Hamilton.

TRUCKS, warehouse and factory

The W. S. Mahaffy Co., Toronto.

TRUNKS

Lamontagne Ltd., Montreal, Que.

J. Eveleigh & Co., Ltd., Montreal, Que.

The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.

TUBING, brass and copper

*Booth-Coulter Copper & Brass Co., Ltd., Toronto.

Canadian Seamless Wire Co., Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

TUBING, gold and silver

Canadian Seamless Wire Co., Toronto.

TUMBLERS, foundry

*Northern Crane Works, Limited, Walkerville.

TURBINES, steam

*The Canadian Crocker-Wheeler Co., Limited, St. Catharines.

TURBINE AND RECIPROCATING PUMPS

*The Bawden Machine Co., Limited, Toronto.

TWEEDS

Rosamond Woollen Co., Almonte, Ont.

TWINES

*Doon Twines Ltd., Doon, Ont.

TWINES, binder

Brantford Cordage Co., Ltd., Brantford, Ont.

TWINES, cotton

Hamilton Cotton Co., Hamilton, Ont.

TWIST DRILLS

John Morrow Screw and Nut Co., Ltd., Ingersoll.

Pratt and Whitney Co., of Canada, Dundas, Ont.

*The Wilt Twist Drill Co., Ltd., Walkerville, Ont.

UNDERWEAR

Galt Knitting Co., Ltd., Galt, Ont.

UNDERWEAR, imperial

Kingston Hosiery Co., Ltd., Kingston, Ont.

UNIONS

*Dart Union Co., Ltd., Toronto, Ont.

*Otterville Mfg. Co., Ltd., Otterville, Ont.

UPHOLSTERED FURNITURE, leather and tapestries

Imperial Rattan Co., Ltd.

VACUUM PUMPS

*The Bawden Machine Co., Limited, Toronto.

Valves

*Kerr Engine Co., Ltd., Walkerville.

VALVES, for steam and water

Jenkins Bros., Ltd., Montreal, Que.

VALVES, reginding globe, angle, cross checks, swing checks, etc.

Penberthy Injector Co., Ltd., Windsor, Ont.

VARNISHES

*Ault & Wiborg Co. of Canada, Ltd., Toronto.

Berry Bros., Walkerville, Ont.

*Dougall Varnish Co., Ltd., Montreal.

R. C. Jamieson & Co., Ltd., Montreal, Que.

Sherwin-Williams Co. of Canada, Ltd., Montreal.

VAULTS AND VAULT DOORS

*The Goldie & McCullough Co., Ltd., Galt.

VENTILATING APPLIANCES

*Sheldons, Ltd., Galt.

VENTILATING SYSTEMS

Gurney Foundry Co., Ltd., Toronto.

VENTILATORS

*The Metallic Roofing Co. of Canada, Ltd., Toronto, Ont.

*Pedlar People, Ltd., Oshawa, Ont.

VINEGAR

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

WAGONS

Tudhope-Anderson Co., Ltd., Orillia, Ont.

WALL COPING

Standard Clay Products, Ltd., St. Johns, Que.

WASHERS

*The Steel Company of Canada, Limited, Hamilton.

WASHERS, plate or wrought

London Rolling Mill Co., Ltd., London, Ont.

WASTES, wool and cotton

Factory Waste and Metal Co., Montreal, Que.

*Scythes & Co., Ltd., Toronto.

WATER-PROOF CEMENT COATING

Benjamin Moore & Co., Ltd., Toronto.

*Paterson Manufacturing Company, Toronto and Montreal.

WAXED PAPER Business Systems, Ltd., Toronto. WEBBING, elastic Hamilton Cotton Co., - Hamilton, Ont. WEBBING, non-elastic Hamilton Cotton Co., - Hamilton, Ont. WHEELS *Canadian Car & Foundry Co., Ltd., Montreal, Que Wheels, corundum *Canadian Hart Wheels, Ltd., Hamilton, Ont. WHEELS, emery *Canadian Hart Wheels, Ltd., Hamilton, Ont. WHEELS, propeller, iron and steel *Wm. Kennedy & Sons, Ltd., Owen Sound, Ont. WHEELS, turbine, water *Wm. Kennedy & Sons, Ltd., Owen Sound, Ont. WHEELS, water (impulse type) John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que. WELL DRILLING TOOLS AND MACHINERY Oil Well Supply Co., Ltd., Petrolia, Ont. WHIPS AND LASHES Lay Whip Co., Rock Island, Que.	WHISKY *Hiram Walker & Sons, Ltd., Walkerville, Ont. WHITE ARSENIC Coniagas Reduction Co., Ltd., St. Catharines, Ont. WHITE ENAMEL *Berry Bros., Ltd., Winnipeg, Man. WHITE LEAD Brandram-Henderson, Ltd., Montreal, Que. A. Ramsay & Son Co., Montreal, Que. WINDMILLS *Goold-Shapley-Muir Co., Limited, Brantford, Ont. *Ontario Wind Engine & Pump Co., Ltd., Toronto. WINDOW SHADES Daly & Morin, Montreal, Que. WIRE *The Steel Company of Canada, Limited, Hamilton. *Eugene F. Phillips, Electrical Works, Ltd., Montreal. The Graham Nail Works, Toronto. WIRE CLOTH *Canada Wire & Iron Goods Co., Hamilton. C. H. Johnston & Sons, Ltd., Montreal, Que. WIRE, feeder and trolley *Eugene F. Phillips, Electrical Works, Ltd., Montreal.	WIRED GLASS *Metallic Roofing Co., Ltd., Toronto. WIRE GUARDS *Canada Wire & Iron Goods Co., Hamilton. C. H. Johnston & Sons, Ltd., Montreal, Que. WIRE, insulated electric *Northern Electric Co., Limited, Montreal. *Eugene F. Phillips, Electrical Works, Ltd., Montreal. WIRE ROPE The Dominion Wire Rope Co., Ltd., Montreal. *The B. Greening Wire Co., Ltd., Hamilton. WIRE, weatherproof *Northern Electric Co., Limited, Montreal. *Eugene F. Phillips, Electrical Works, Ltd., Montreal. WIRE WORK C. H. Johnson & Sons, Ltd., Montreal, Que. *Canada Wire & Iron Goods Co., Hamilton. *The Geo. B. Meadows, Toronto, Iron and Brass Goods Works Co., Ltd., Toronto.	WOOD Standard Fuel Co., Toronto. WOOD PRINTERS Barchard & Co., Ltd., Toronto. WOOD PULP, mechanical La Cie de Pulpe de Chicoutimi, Chicoutimi, Que. WOOD SPLIT PULLEYS *Dodge Mfg. Co., Ltd., Toronto. *The Goldie & McCulloch Co., Ltd., Galt, Ont. WOOL *H. V. Andrews, Toronto. WORSTED COATINGS AND SUITINGS Rosamond Woollen Co., Almonte, Ont. WRAPPERS, book, bottle, etc. *The Thompson & Norris Co., of Canada, Ltd., Niagara Falls, Ont. WROUGHT IRON PIPE *The Steel Company of Canada, Ltd., Hamilton. WROUGHT PIPE *The Steel Company of Canada, Ltd., Hamilton. YARNS, cotton Hamilton Cotton Co., Hamilton, Ont. ZINC, electrical *The Canada Metal Co., Toronto.
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* For Display Advertisement See Index Page 1013

THE BOOTH-COULTER COPPER & BRASS COMPANY, LTD.

SHEETS TUBES COPPER & BRASS AND RODS

SPECIAL SIZES CUT TO ORDER FROM LARGE STOCK—PROMPT SHIPMENT
115-121 SUMACH STREET TORONTO, CANADA

DENNISTEEL
 LONDON - CANADA

THE BEST STEEL LOCKERS MADE IN CANADA
 MADE BY
 THE DENNIS WIRE AND IRON WORKS CO. LIMITED
 LONDON, CANADA

 Established
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 Offices Throughout the Civilized World

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SOLICITORS FOR THE CANADIAN MANUFACTURERS' ASSOCIATION

Offices—Toronto General Trusts Building
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TORONTO
 Canada

INDUSTRIAL CANADA



Selling the King's Service

The phenomenally successful advertising campaign of the

109th REGIMENT OVERSEAS BATTALION

(169th Batt'n, C.E.F.)

was prepared and placed by us.

We had the honor to be retained and instructed by Major W. S. Dinnick, Officer Commanding the 109th Regiment, to do the work.

As a matter of history, it may be said that this battalion was raised in less time than any other battalion since the commencement of the war, despite the fact that there were six other units in the field during its recruiting period.

J. J. GIBBONS, LIMITED

General Advertising Agents

MONTREAL

Cables—Gibjay, Toronto.

Head Office:

TORONTO

WINNIPEG

Codes—Liebers, ABC, 5th Edition

PUBLISHED BY THE CANADIAN
MANUFACTURERS ASSOCIATION INCORPORATED.

HEAD OFFICE BRANCH OFFICES,

• TORONTO • MONTREAL, HAMILTON, WINNIPEG, VANCOUVER, HALIFAX, QUEBEC.

MALLEABLE IRON CASTINGS

The Pratt & Letchworth Company Limited

BRANTFORD ONTARIO

AUTOMOBILE PARTS
DROP FORGINGS



We have erected and are now operating

THE LARGEST COMMERCIAL DROP FORGE PLANT IN CANADA

We are equipped to handle large forging contracts.
This expansion also increases our stamping facilities.
We stand by our Motto: Quality and Service.

SHEET METAL WORK
GENERAL STAMPINGS

DOMINION FORGE & STAMPING CO., LIMITED
Walkerville - Ontario



"Giving Satisfaction"

This is the true measure of a manufacturer's service to his constituency. It has been our constant aim since we commenced to do business eight years ago. Our large and rapidly expanding trade is proof that our products and our methods of doing business appeal to our customers.

The greatest possible care and attention are given at our Refinery to the manufacture of the different lines—the highest obtainable quality being our goal. The statement "WE MAKE THAT GOOD OIL" has now passed into a proverb as referring to the products of The British American Oil Co.

We guarantee every gallon of British "Peerless" and Motor Gasolene, Benzine, Lamp Oil, Lubricating Oil, "Ford Motor Oil," "Autolene" for other motors, Fuel Oil, Road Oil and other Products.

We are prepared to live up to the guarantee that if any of our goods are not as represented they may be returned at our expense and money will be refunded if already paid for same. In no case will we allow a customer to make a loss on account of our products not being equal to representation.

We make our products as good as we know how and have justifiable confidence in them. Our customers have a right to demand value for their money and we see that they get it. We do not pose as philanthropists; this is pure business.

Our watchword is "GIVING SATISFACTION."

The BRITISH AMERICAN OIL CO., Limited

REFINERS, FOOT OF CHERRY STREET, TORONTO

Head Office: LUMSDEN BUILDING, TORONTO

Branches: MONTREAL, OTTAWA, LONDON, WINDSOR

LEAKS

MEAN LOSSES

LOSSES MEAN LESS PROFIT

Make the joints on your pipe lines with Dart Unions, and they will never leak. It is worth your while to know what that will mean.

Jobbers sell them. Do you wish a sample?

DART UNION CO., Ltd.
TORONTO

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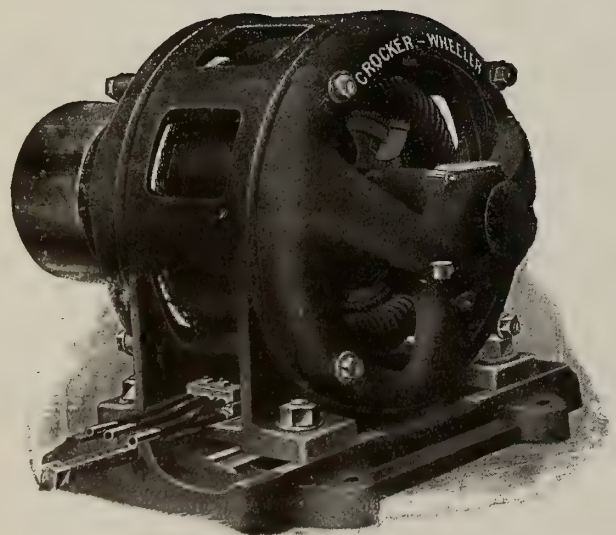
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THE DESIGN OF CROCKER-WHEELER INDUCTION MOTORS

INCLUDES :

Heavy Shafts

Large Journals

High Power Factor

Excellent Efficiency

They have many other desirable features ;

Bulletin 155 describes them.

THE CANADIAN CROCKER-WHEELER CO., Limited

MANUFACTURERS AND ELECTRICAL ENGINEERS

Head Office and Works : St. Catharines

District Offices : Montreal, Toronto, Vancouver

We Have Prepared the Way

WE HAVE SPENT thousands of dollars on Street Car patrons impressing on them the advantages of purchasing "Made-in-Canada" Products.

We were the first in the field with a "Made-in-Canada" campaign, prepared, placed and carried out entirely at our own expense, for the benefit of Canadian Street Car advertisers.

Canadian Manufacturers

who use Street Car advertising get the direct benefit of all the money we have spent, in addition to getting the greatest possible amount of the best advertising for every dollar of their own they spend on Street Car space.

There are 1,735,685 passengers carried daily on the street car lines we control throughout Canada, and with these we have prepared the way for "Made-in-Canada" campaigns.

They are ready to purchase goods made in Canada, but they have to be told what goods are made here.

At a cost of only One Dollar you can reach over 48,000 of these consumers through an advertisement in the Street Cars.

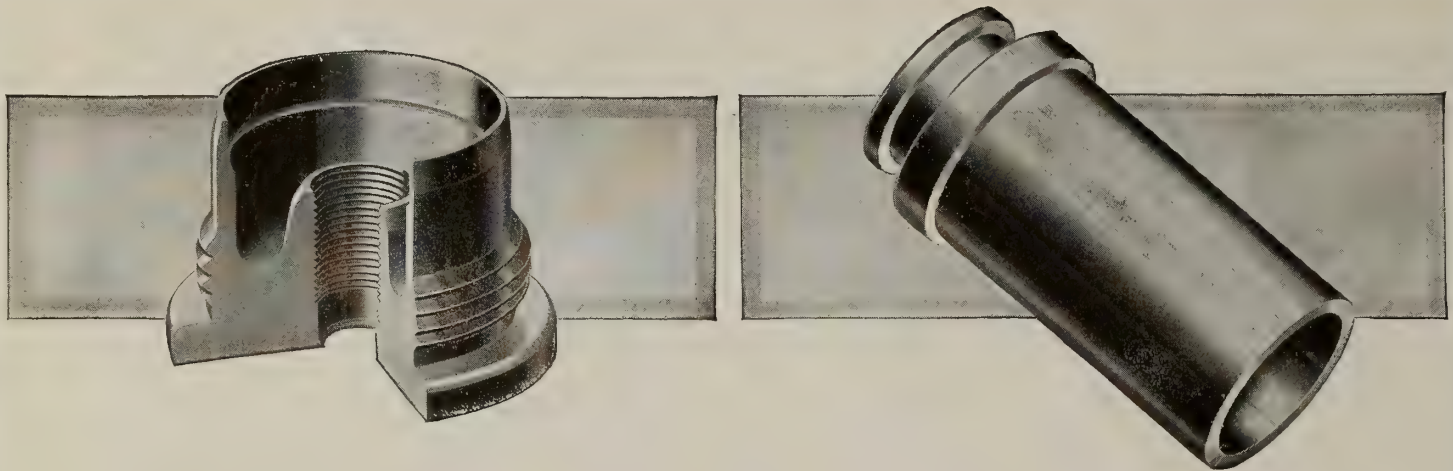
Let us tell you more about it. Any of our offices will respond promptly to a request for information.

The
Canadian Street Car Advertising Company
Limited

MONTREAL

TORONTO

WINNIPEG



NAMCO SPECIAL SCREW PRODUCTS

"CANADIAN MADE FOR CANADIAN TRADE"

Buyers of large quantities of Special Screw Machine Work realize the importance of placing their orders where accuracy is not sacrificed for production.

The NAMCO Plant at Montreal is run by experienced men who know how to meet your demands for "true-to-gage" screw machine work.

This means clean-cut, accurate and uniform screws and special milled parts. The kind that are ready to use from the packing case.

NAMCO "made-in-Canada" screw machine work stands for satisfactory screw-cutting Service.

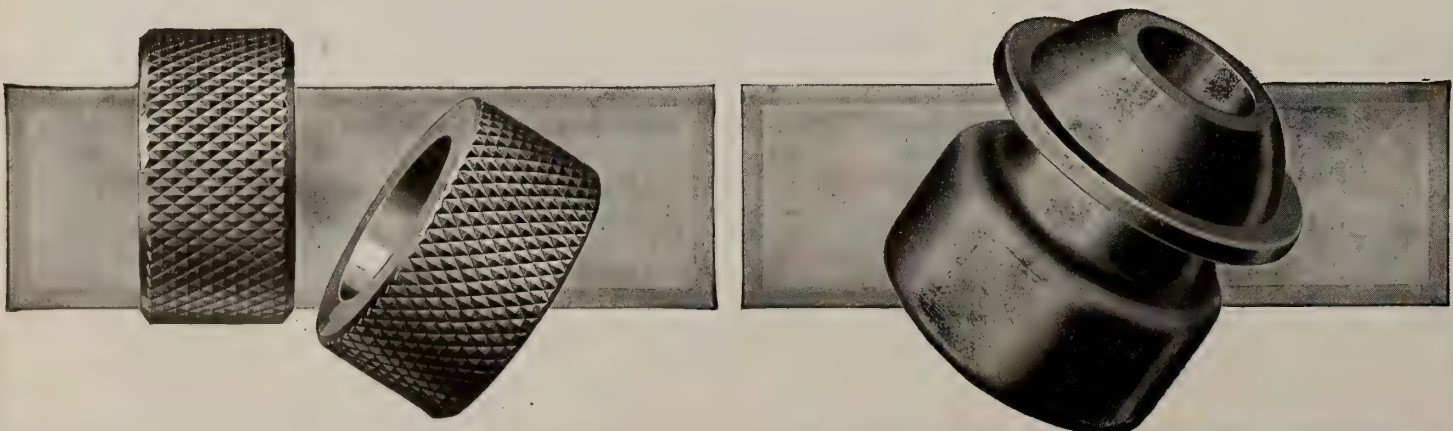
Are you satisfied?

Send in your samples or blue prints for quotations — no obligation.

THE NATIONAL-ACME MANUFACTURING COMPANY

DE COURCELLES ST.
AND G.T.R., ST. HENRI

MONTREAL, P.Q.





LATHES and Attachments

for the manufacture of— — —

This Equipment is
all New, Modern
and Heavy

Write or wire our
nearest office for
particulars

EARLY DELIVERY

6", 8"
and
9.2
HIGH
EXPLOSIVE
SHELLS

THE JOHN BERTRAM & SONS CO.
LIMITED

DUNDAS, ONTARIO, CANADA

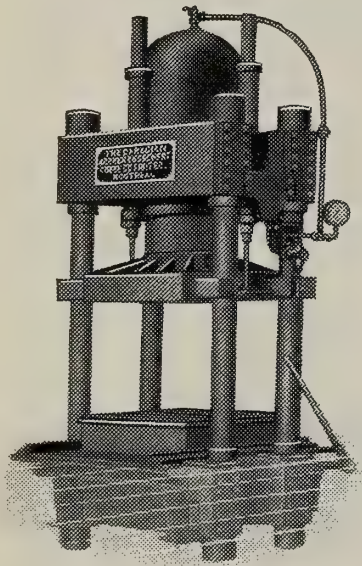
MONTREAL
723 Drummond Bldg.

VANCOUVER
609 Bank of Ottawa Bldg.

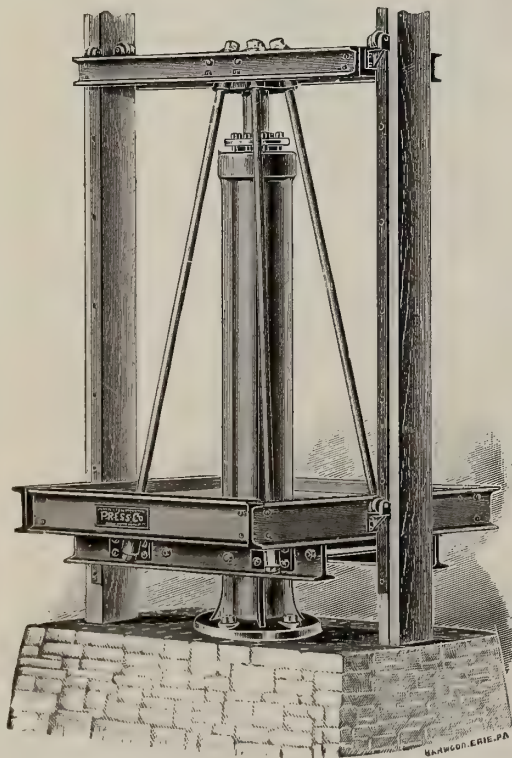
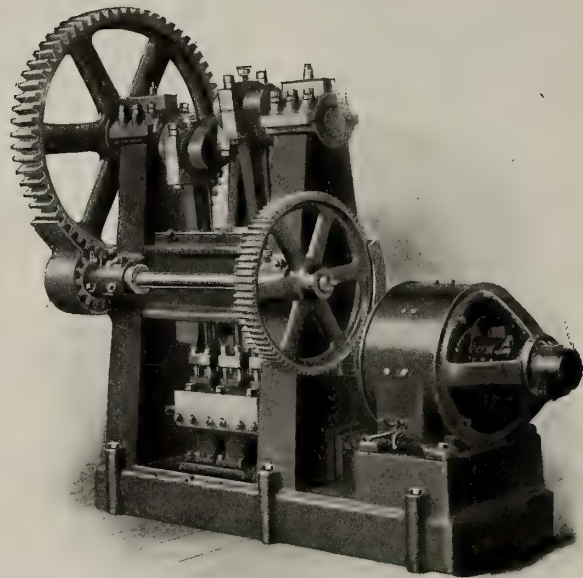
WINNIPEG
1205 McArthur Bldg.



Hydraulic Presses, Pumps and Accumulators



For all
purposes
where
pressure
is
required.



We are the largest manu-
facturers of this class of
machinery in Canada.

Bulletins sent
upon request.

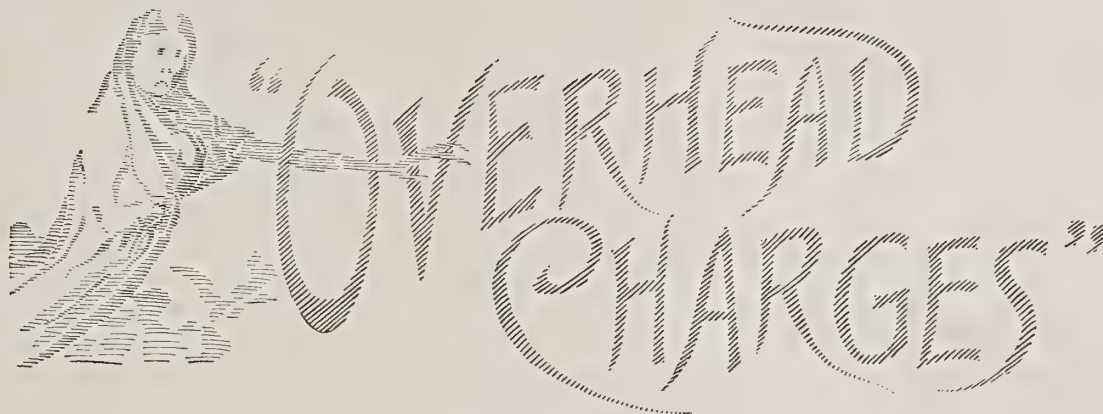
Canadian Boomer & Boschert Press Co., Limited

18 Tansley St.

Cable Address : Pressco

MONTREAL

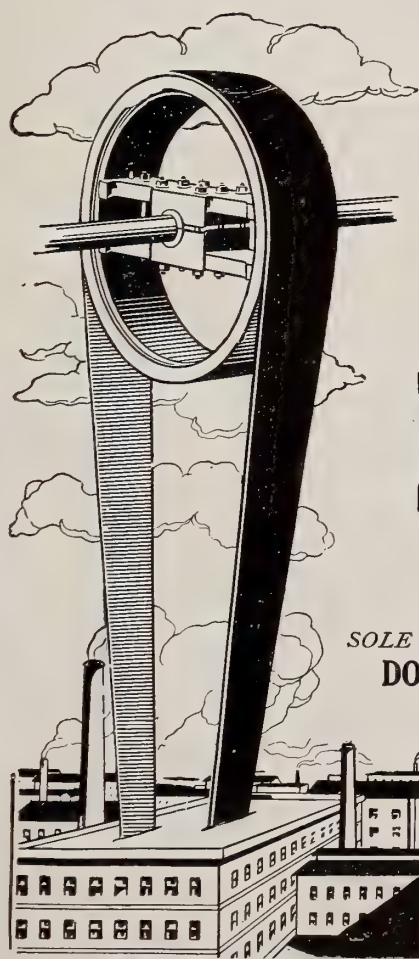
That grim spectre—



RELENTLESS and ever present in Factory operation is the spectre of Overhead Charges.

Its ravages among the profits of your business must be constantly checked. One of its most active lieutenants is *Power Wastage*—caused by belt slippage over metal pulleys. Many thousands of dollars are wasted yearly in Canadian Factories and workshops where Wood Pulleys would save 50% of the waste.

Actual scientific tests show that on the average you can buy *four* Dodge Wood Split Pulleys with the money you now lose by waste from one Metal Pulley. Therefore we appeal to Presidents of Companies, Managers and Superintendents of Factories, Engineers and others, to personally supervise the buying of their pulleys and specify always—



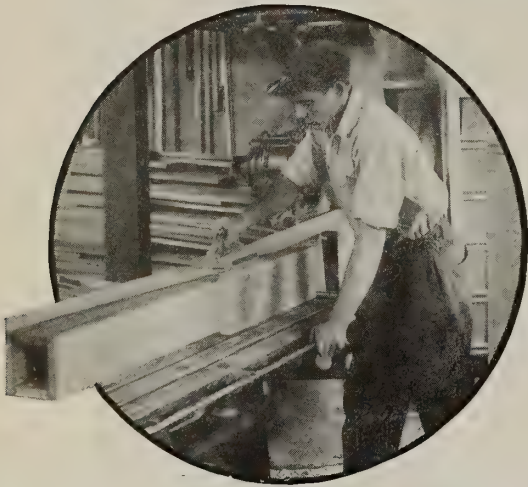
DODGE

WOOD SPLIT PULLEYS

SOLE MAKERS:

DODGE MANUFACTURING CO. Limited, TORONTO

We'll Demonstrate this Machine—FREE— On Your Own Work!



Built-up pieces, large or small, are sanded on the 427



Curved surfaces and irregular shapes are sanded equally well. Special forms and devices can be furnished for holding the work.

IF you will send us samples of such work as you are still sanding by hand, those most expensive operations, we will show you how much you should be saving with this latest Berlin hand-block belt sander.

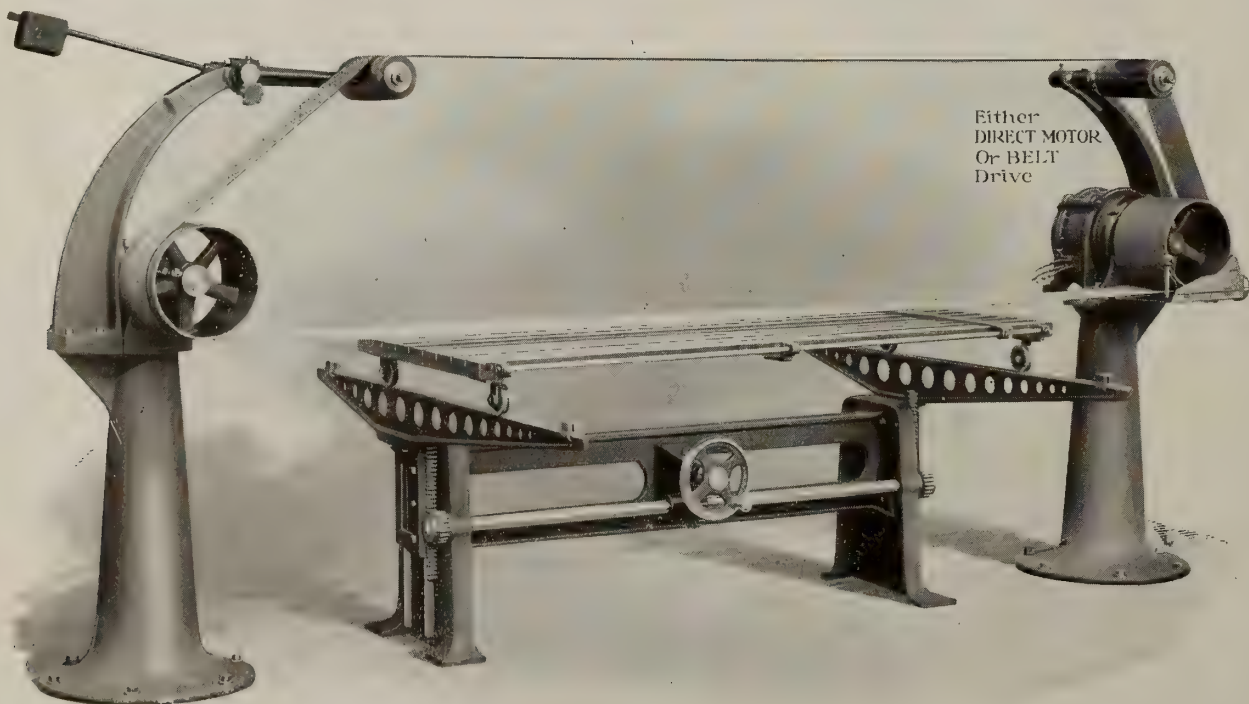
On millwork, furniture or special jobs, the saving will return the investment many times. Work you've heretofore considered impossible to sand by machine is now easily handled.

You may have belt sanders now—good machines for some purposes—but not as labor-saving on your work as the Berlin "427."

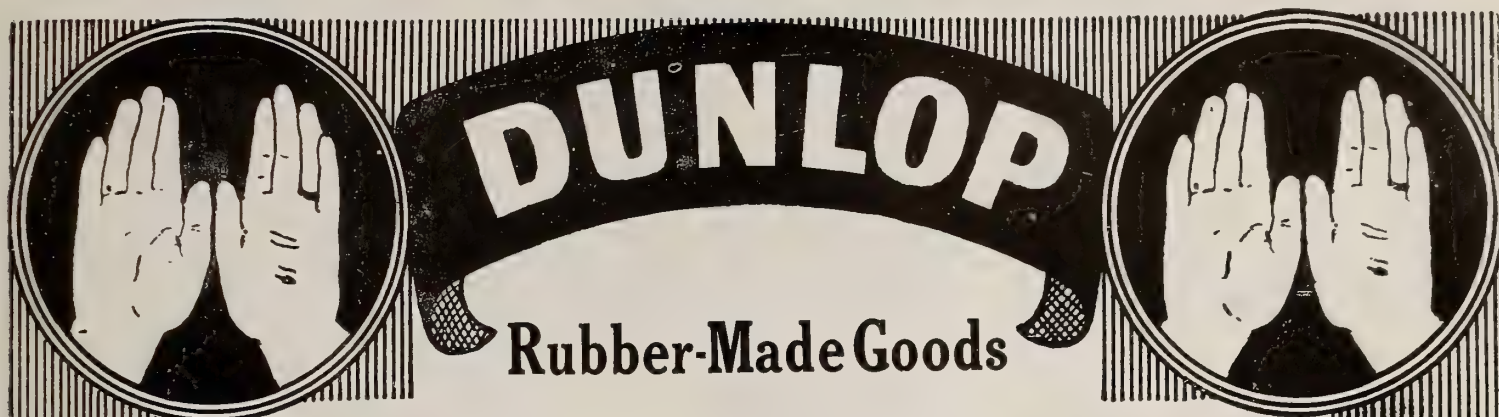
No matter how efficient you consider your present methods, here is a real profit-saver, with better quality finish thrown in.

*Free details on construction mailed on request.
Ask for circular 427.*

Berlin Machine Works, Ltd. Hamilton, Ont.



Either
DIRECT MOTOR
Or BELT
Drive



Dunlop Main Drive Belts

Gibraltar—red, friction face, heavy duck—every inch a dependable belt and the highest grade obtainable. Ideal for heavy service. Stands up under any tests no matter how irregular and severe. No separation of plies, no rotting of duck from dampness, no abnormal stretching. We, also, make any grade of rubber-faced belt for main drive purposes.

Dunlop Conveyor Belts

Are known for their endless fund of toughness and enduring quality. (Consistency and continuity of service are so important, especially in the conveyance of materials, that it pays to select a belting of proven efficiency.) Resist moisture and the cutting action of sharp materials. Retain their pliability. Will not chip or separate. Ample provision is made for the protection of the edges of the belts from the guiders by the addition of a liberal thickness of rubber.

Dunlop Steam Hose

Is the final result of continuous experimentation to produce an ideal steam hose. Has a specially compounded tube to resist the action of steam under varying pressures. Being seamless, also, there is no possibility of the steam working its way into the duck. The best of fine, specially-woven cotton in the body of the hose and a high-grade, scientifically compounded rubber friction ensure protection against abnormal treatment.

The Dunlop line consists of High-Grade Tires for Automobile, Motor Truck, Bicycle, Motorcycle and Carriage, and High-Grade Rubber Belting, Packing, Fire Hose and General Hose, Mats, Tiling, Heels, Cements and General Rubber Specialties.

Dunlop Tire & Rubber Goods Co., Limited

Head Office and Factories : TORONTO, CANADA

BRANCHES:

Victoria	Vancouver	Edmonton	Calgary
Saskatoon	Regina	Winnipeg	London
Hamilton	Toronto	Ottawa	Montreal
	St. John	Halifax	

Dunlop Fire Hose

The Pride of Every Fire Department

Utmost Power, Greatest Wear and Undisputed Leadership, characterize all Fire Department Hose branded with the name "Dunlop" and the famous "Two Hands" trademark. Municipalities in great numbers proclaim Dunlop Fire Hose superior by using it exclusively and continually. Straight and smooth waterway—weight, grade and texture of cotton jackets always right. Supplied with Cotton Jacket or Rubber Cover—any grade to suit all requirements.

We are the only rubber company in Canada authorized by the Underwriters' Laboratories, Inc., Chicago, to manufacture Fire Hose, bearing their rubber label of approval.

Dunlop Pneumatic Tool Hose

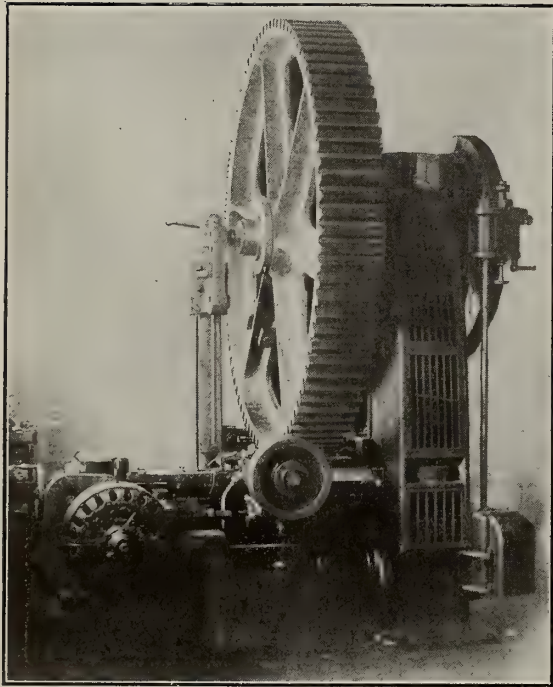
Impervious to oils. Has the requisite strength, yet is light and flexible so as to be easily handled. Plain cover, wire-wound, if desired.

Dunlop "Sunset" High Pressure Packing

Remains soft on the hottest joint. That flexibility gives it the necessary "life" to withstand the highest pressures. A perfect packing for all joints and immune to the effects of steam, alkalies or ammonia.

CUT GEARS

CUT
GEARS



CUTTING LARGE STEEL SPUR GEAR

90" diam., 88 teeth, 1 diam. pitch,
12" face, 5,700 lbs. weight.

Nothing special about this job for us.

Hamilton Gear and Machine Co.

COR. CONCORD
AND VAN HORNE

TORONTO



Let us systematize your handling problem.

Canadian Mathews Gravity Carrier Co., Ltd.
484 Richmond St. W., Toronto Patented

SAWS FOR SHELLS

We have experimented on the
SPECIAL SHELL STEEL

and have produced a
HACK SAW BLADE
that will give unequalled
service on this material in
HIGH-SPEED MACHINES

Possibly we could help you.

*"Victor Blade—
Canadian-Made"*

VICTOR SAW WORKS, LTD.
HAMILTON, ONT.





MADE IN CANADA

Manufacturers of

**BRASS, BRONZE, GILDING METAL
AND "CANADA" SILVER IN SHEETS
ROLLS, PLATES AND RODS**

**Special Marine Bronze Rod for
Shafting and Bearings**

**For Drilling and Free Turning
ORDER**

**BEAVER BRAND ROD
BEAVER BRAND "SPINNING BRASS"**

Brown's Copper and Brass Rolling Mills, Limited

General Offices and Mills :

NEW TORONTO, CANADA

BOILERS



STANDARD RETURN TUBULAR BOILER

We make boilers of all kinds for any service.

We are also sole Canadian makers of Erie City Water Tube Boilers, Vertical and Horizontal.

The large number of pleased and satisfied owners of "INGLIS" Boilers is our best advertisement.

For (52) fifty-two years our boilers have been the standard. We have installations of our different types of boilers, which our representatives will be pleased to show to prospective purchasers. Write us for prices, etc.

INGLIS' PRODUCTS ARE "MADE-IN-CANADA"

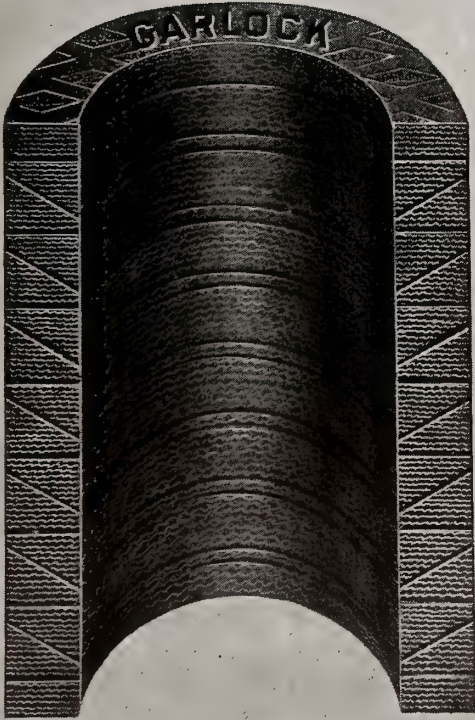
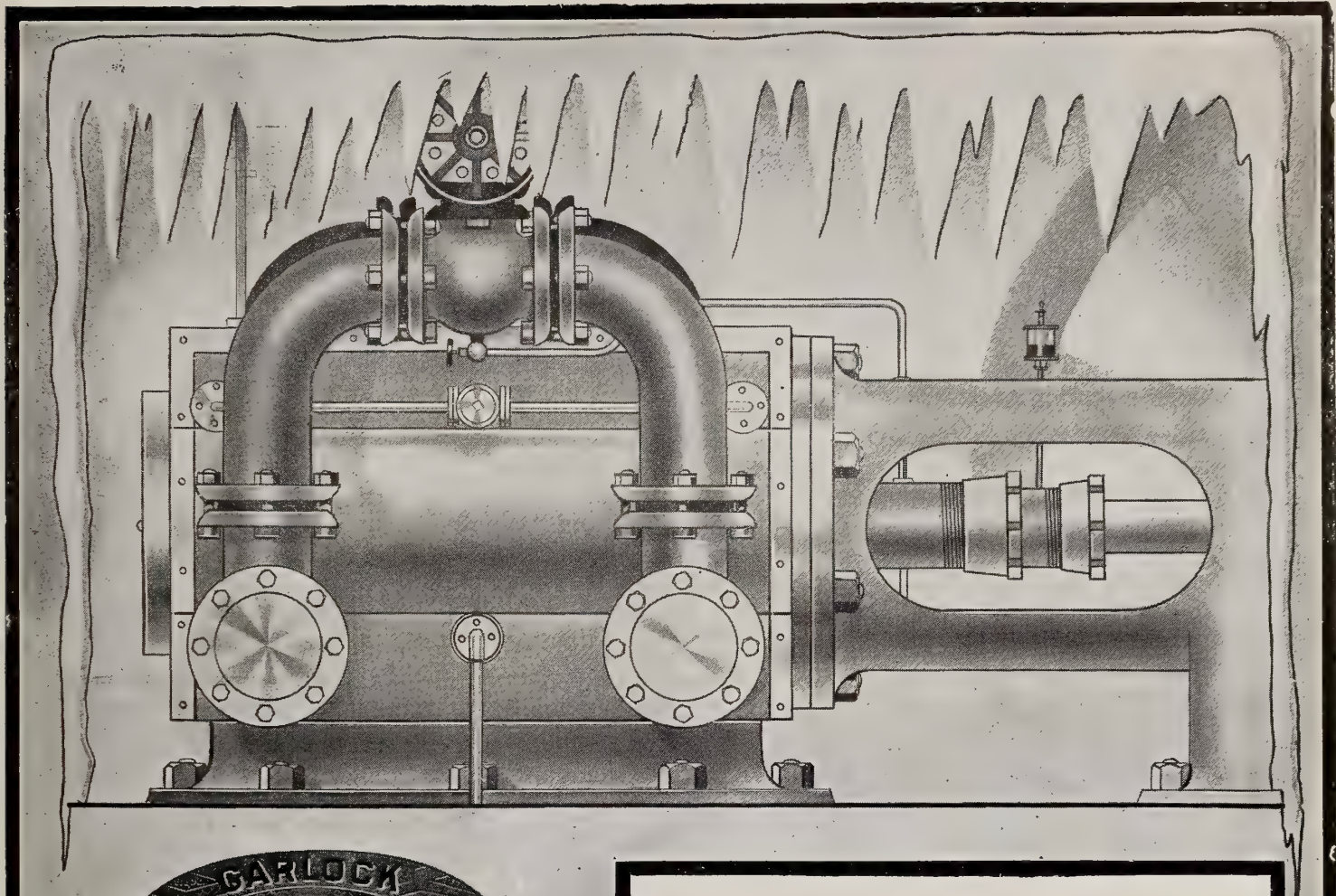
The John Inglis Company, Limited

ENGINEERS AND BOILERMAKERS

14 Strachan Avenue

Toronto, Canada

Ottawa Representative: J. W. ANDERSON, 7 Bank Street Chambers



REFRIGERATING ENGINEERS

and owners of ice plants do not care to experiment with Ammonia Packing during their busy season. Conditions of temperature and lubrication demand a scientifically made, high-grade packing, for this service. Before repacking your compressor stuffing boxes this Spring, write to our nearest branch for catalog illustrating and describing several styles and combinations of

Garlock Ammonia Packings

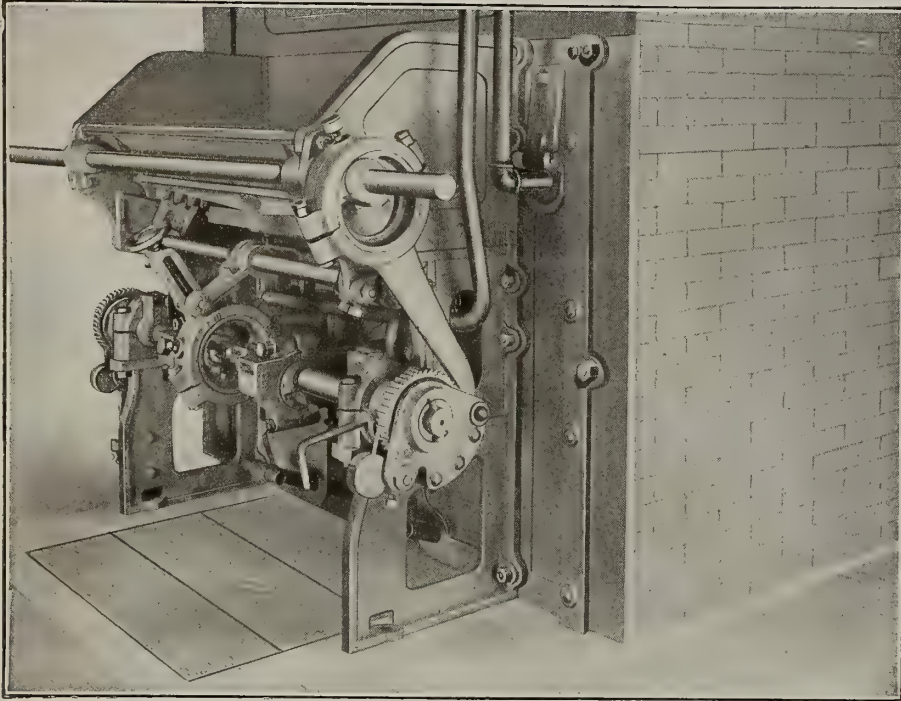
or send us a statement of your conditions and requirements and benefit by our many years' experience in this field.

THE GARLOCK PACKING COMPANY, Hamilton, Ontario

BRANCHES:

Montreal, Quebec.....342 St. James Street
 Toronto, Ontario.....404 Continental Life Bldg.
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Bert Collins.



No. 4807, Fulton Watercooled Stoker Under an H. R. T. Boiler. Flush Front.

THE HARE ENGINEERING COMPANY LIMITED

HEAD OFFICE : 99-101 KING ST. WEST, TORONTO, ONTARIO

LOWER FUEL COSTS
BY INSTALLING THE

FULTON STOKER

Some of the recent installations in Canada :

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Hinde & Dauch Paper Co., Ltd., Toronto, Ont.
Canada Forge Company, Ltd., Welland, Ont.
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City of Toronto, Pumping Station

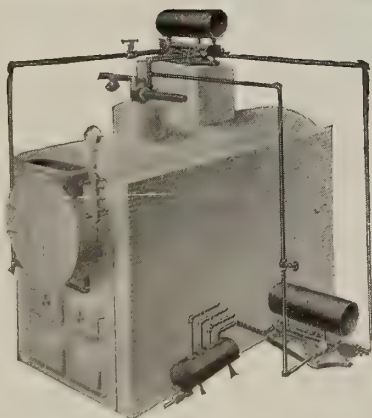
The above aggregate 3,010 H.P.

SEND FOR BULLETIN F-106 I
A POSTCARD WILL BRING IT

MADE IN CANADA
15,000 H.P. IN USE

Sales Agencies :

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For
Draining
Your
Steam
Apparatus

There is no limit to the useful and economical application of the

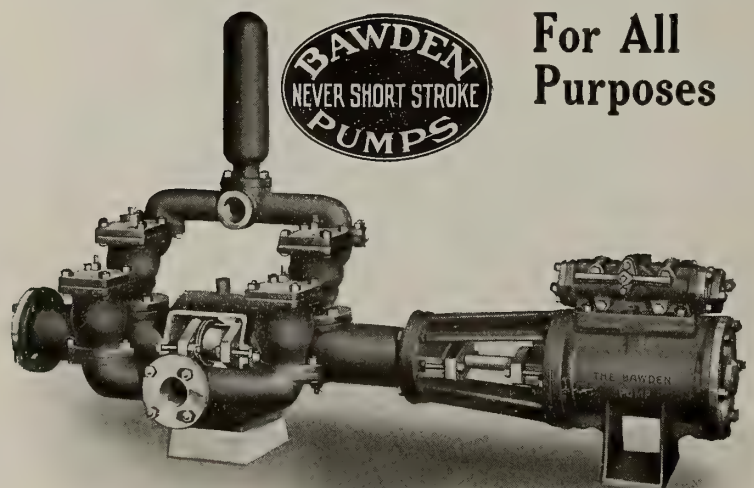
Morehead Back-to-Boiler SYSTEM

The economy of returning the hot condensation direct to the boiler without pumping lies in the difference in fuel required to evaporate cold feed water and the small amount to re-vaporize the pure hot condensation back into steam. That difference amounts to as high as ten tons of coal saving per day. References and proof on request.

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For All
Purposes



The pumps backed by a grand reputation
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If it is specially hard to handle, put it up to us. Experience counts in this work, and we've had lots of it.

Air Tanks
Gas Tanks
Storage Bins
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Washing Tanks
Steel Reservoirs
Steel Retorts

Any Size, Any Style

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CANADA.

If You Want a Well-Built Steel Tank or Bin—Write Us!

IT takes more than good material to build a good Steel Tank. Correct workmanship and knowing how have a lot to do with the satisfaction a tank will give you.

Waterous Steel Tanks are built to deliver service, first, last and all the time. The wear is there—it's put in in the building. We use the best of materials only, work right up to specifications, and turn out our Tanks in a modern shop by modern methods.

We have been building Tanks for 30 years. This experience is combined with up-to-date equipment to cut down manufacturing cost. That's why a Waterous Tank that will last you twice as long, in nine cases out of ten, costs you no more than the other kind.

We guarantee our Workmanship. We know our prices are right. Why not send us your Sketches and see what we can save you?

The WATEROUS ENGINE WORKS CO., Limited
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Earning Dividends in Your Boiler Room



What! Make money out of the Department that is a constant expense?

Let us tell you how other manufacturers manage it.

Jones Underfeed Stoker

MADE-IN-CANADA

effects a saving of from 15 per cent. to 25 per cent. in fuel. Jones Stokers have been in operation in big and little plants throughout Canada for years. The small plant is saved in proportion as much as the big one.

SIMPLE IN CONSTRUCTION
SATISFACTORY IN ACTION

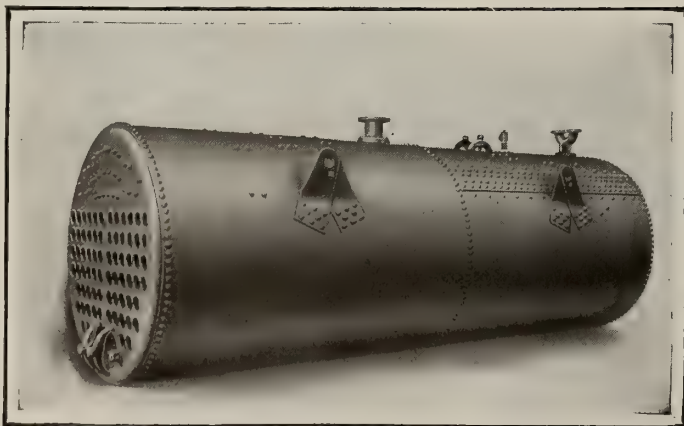
Let us send you a descriptive booklet.

JONES UNDERFEED STOKER COMPANY, Ltd.

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E. Leonard & Sons, Limited

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Manufacturers of

**BOILERS
ENGINES**

of all types and
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1875

1916

THE BOILER INSPECTION & INSURANCE COMPANY OF CANADA

Head Office: THE CONTINENTAL LIFE BUILDING, TORONTO

President and Chief Engineer,
GEORGE C. ROBB

Vice-President and General Manager,
H. N. ROBERTS

FINANCIAL STATEMENT, JANUARY 1, 1916

Assets		Liabilities	
Cash on hand and in Banks	\$8,706.79	Unearned Premium Reserve	\$83,863.05
Mortgage Loan	5,000.00	Other Liabilities	451.50
Stocks, Bonds and Debentures	255,292.92	Total Liabilities except capital	\$84,314.55
Other Assets	16,116.83	Capital paid up	\$100,100.00
		Surplus over all Liabilities	100,701.99
		Total surplus for Policyholders	200,801.99
	<u>\$285,116.54</u>		<u>\$285,116.54</u>

LIST OF SECURITIES OWNED BY THE COMPANY

Market Value December 31, 1915.

Debentures		Debentures	
City of Vancouver, 3½%, 1942	\$4,900.00	Amount brought forward	\$117,285.52
City of Vancouver, 4%, 1946	5,320.00	City of Medicine Hat, 5%, 1932-35	10,800.00
Town of Owen Sound, 4%, 1923	3,600.00	City of Toronto, 4½%, 1963	13,050.00
City of London, 4%, 1921	5,580.00	Province of Alberta 4½%, 1924	27,900.00
Town of Maisonneuve, 4½%, 1946	8,300.00	City of Regina, 5%, 1929	9,400.00
Town of Westmount, 4½%, 1947	7,200.00	Province of Saskatchewan, 5%, 1925	9,600.00
City of Hamilton, Hospital Ex., 4%, 1915-1919	6,890.29	Dominion Government War Loan, 5%, 1925.....	2,500.00
City of Kamloops, 5%, 1956	4,150.00		
City of Edmonton, School Dist. No. 7, 5%, 1915-38	10,695.23		
City of Saskatoon, School Dist. No. 13, 5%, 1921..	18,000.00		
District of Burnaby, 5%, 1922	23,750.00		
City of Strathcona, 4½%, 1949	9,600.00		
City of Moose Jaw, 4½%, 1921	9,300.00		
Amount carried forward	<u>\$117,285.52</u>		<u>\$255,292.92</u>

The Policies of the Boiler Inspection and Insurance Company of Canada are guaranteed by the Hartford Steam Boiler Inspection and Insurance Company under a license granted by the Dominion Government for that purpose.

The Hartford Steam Boiler Inspection and Insurance Company

Head Office: HARTFORD, CONN.

President, LYMAN B. BRAINERD

Vice-President, F. B. ALLEN
Chief Agent in Canada, H. N. ROBERTS

Secretary, CHAS. S. BLAKE

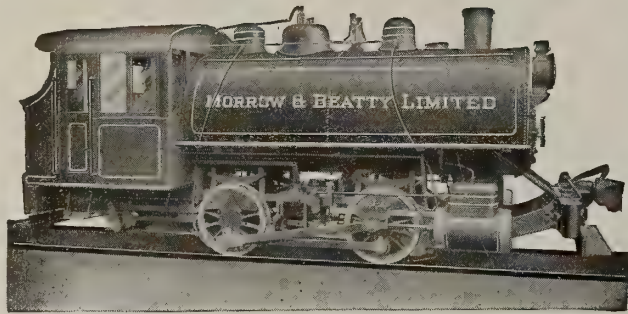
Head Office in Canada: CONTINENTAL LIFE BUILDING, TORONTO

FINANCIAL STATEMENT, JANUARY 1, 1916

Assets		Liabilities	
Cash on Hand and in Banks	\$169,588.94	Reserve for Unearned Premiums	\$2,473,007.92
Mortgage Loans	1,448,245.00	Other Liabilities	190,654.98
Real Estate	90,000.00	Total Liabilities except capital	\$2,663,662.90
Bonds and Stocks, market value	4,008,399.40	Capital paid up	\$2,000,000.00
Other Assets	518,182.98	Surplus over all liabilities	1,570,753.42
		Total surplus for Policyholders	3,570,753.42
	<u>\$6,234,416.32</u>		<u>\$6,234,416.32</u>

Total Surplus Assets for Security of Policyholders, Boiler Inspection and Insurance Co., \$3,771,555.41

INDUSTRIAL LOCOMOTIVES



Best results are obtained from a locomotive only when designed and built to meet special service requirements.

Our standard light locomotives were designed after a careful study of the conditions under which they must operate.

Every piece of material entering into their construction must undergo a thorough test and conform to the same specifications required for the largest locomotives. Only the best materials are used, insuring long life and satisfactory results.

Write us when you want a locomotive.

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SERVICE FIRST

"BEATTY"

Material Handling Plant

Has Constant Service built right into it.

We have successfully met the growing demands of the contracting business for Fifty Years, and our reputation is based on the Service idea.

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TORONTO BRANCH: 4th Floor, 154 Simcoe Street

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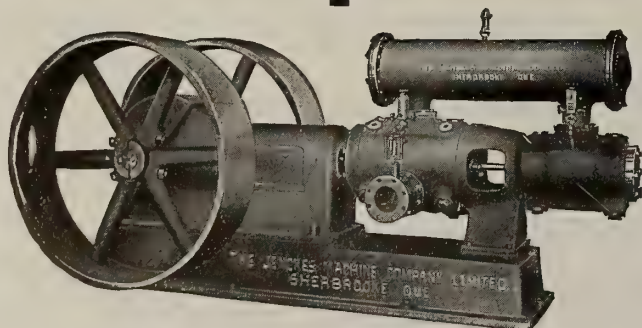
H. E. Plant, 1790 St. James St., Montreal

E. Leonard & Sons, St. John, N.B.

Robt. Hamilton & Co., Vancouver, B.C.

Kelley-Powell Limited, McArthur Bldg., Winnipeg

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TWO-STAGE, BELT-DRIVEN AIR COMPRESSORS

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Moderate in cost. Built to successfully stand severe and continuous service. Full range of sizes and types.

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LIMITED

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Yachts, Marine and Stationary
Engines and Boilers. :: ::

Office and Works

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Toronto

AGENTS FOR QUEBEC

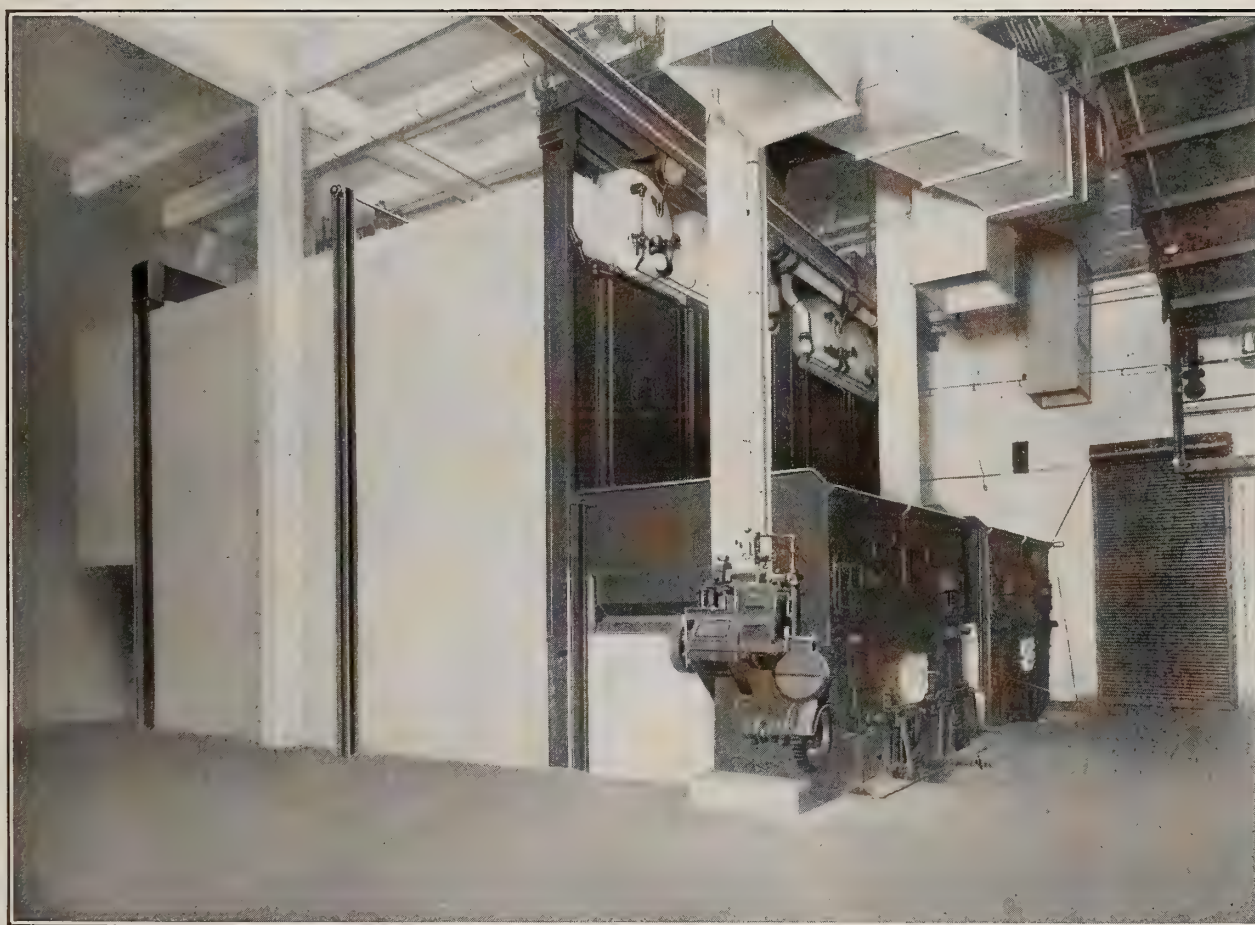
WATSON JACK & CO.

709 Power Building - Montreal, Que.

HIGH-GRADE Power Equipment

G. & McC. Co. Engines and Boilers are designed and built by experts. The first consideration is Quality.

They insure the Maximum of Service,
Efficiency and Economy.



The illustration shows the Boiler Room of the New Methodist Book Room Building, equipped by us with two G. & McC. Co. Sectional Water Tube Boilers.

G. & McC. Co. Boilers excel in positive and rapid circulation and in **INCREASED STEAMING CAPACITY.**

The benefit of our sixty years' experience in the manufacture of Power Machinery is yours for the asking. If you contemplate any alterations or additions to your power plant, talk the matter over with one of our Engineering Experts. They are at your disposal.

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TORONTO OFFICE :
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Traders Bank Bldg.

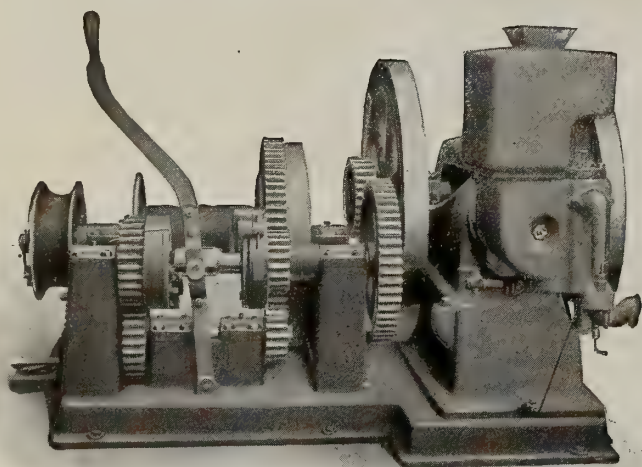
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248 McDermott Ave.
Winnipeg, Man.

QUEBEC AGENTS :
Ross & Greig
412 St. James St., Montreal, Que.

BRITISH COLUMBIA AGENTS :
Robt. Hamilton & Co.
Vancouver, B.C.

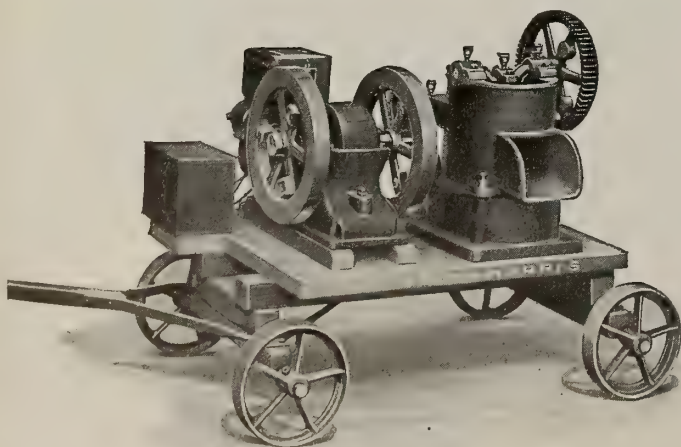
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**Hoists, Diaphragm Pumps, Plows,
Dump Wagons, Dump Carts, Dump
Boxes, Heavy Teaming Gears,
Gasoline Engines, Etc.**



Massey-Harris Direct Connected Hoist has powerful Double Gearing; Band Brake; Adjustable Band Clutches, and in every respect will be found all that a good, reliable Hoist should be. Several sizes and styles to suit different requirements.

Massey-Harris Diaphragm Suction Pump. Consists of one of the well-known Massey-Harris Gasoline Engines and a "Goulds" Pump mounted on a convenient hand truck. Both Engine and Pump are the best that can be produced. Full particulars on request.



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The upper contact points are set to the maximum size—the lower to the minimum. Lay the screw between the upper points and let it "find its own level." Can anything be simpler?



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of reducing and regulating valves stands without an equal in variety, efficiency and wearing qualities. Every regulating problem is solved by this unequalled line.

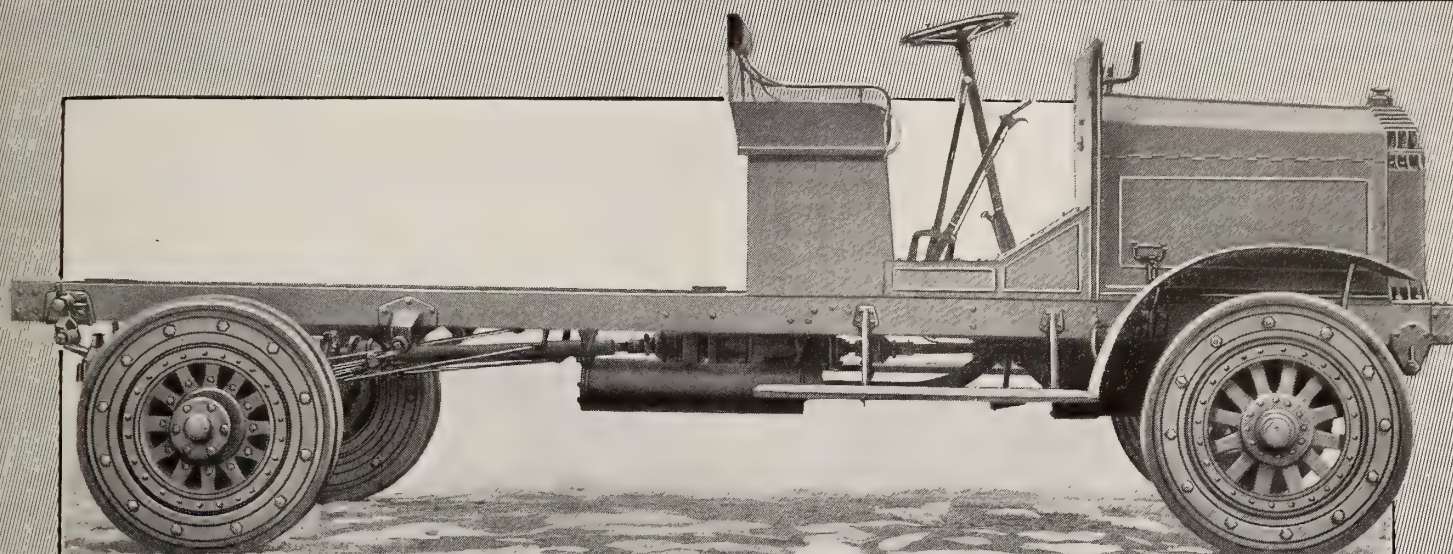


13160

The 13160 is the greatest all-around valve on the market.

Ask us for No. 5 Catalog.

H. MUELLER MFG. CO., LTD.
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National Worm-Drive Trucks

The big success at the Montreal Motor Show.

The big success for light or heavy duty hauling.

NATIONAL Motor Trucks are strong, sturdily built, dependable cars. Four models supply every useful capacity—1,000 pounds, 1,500 pounds, 4,000 pounds and 7,000 pounds.

The NATIONAL is not an ordinary car. It is a super-car, built to British war office specifications. NATIONAL Trucks are proven to be economical in operation, and up-keep. They give every-day-year-'round service.

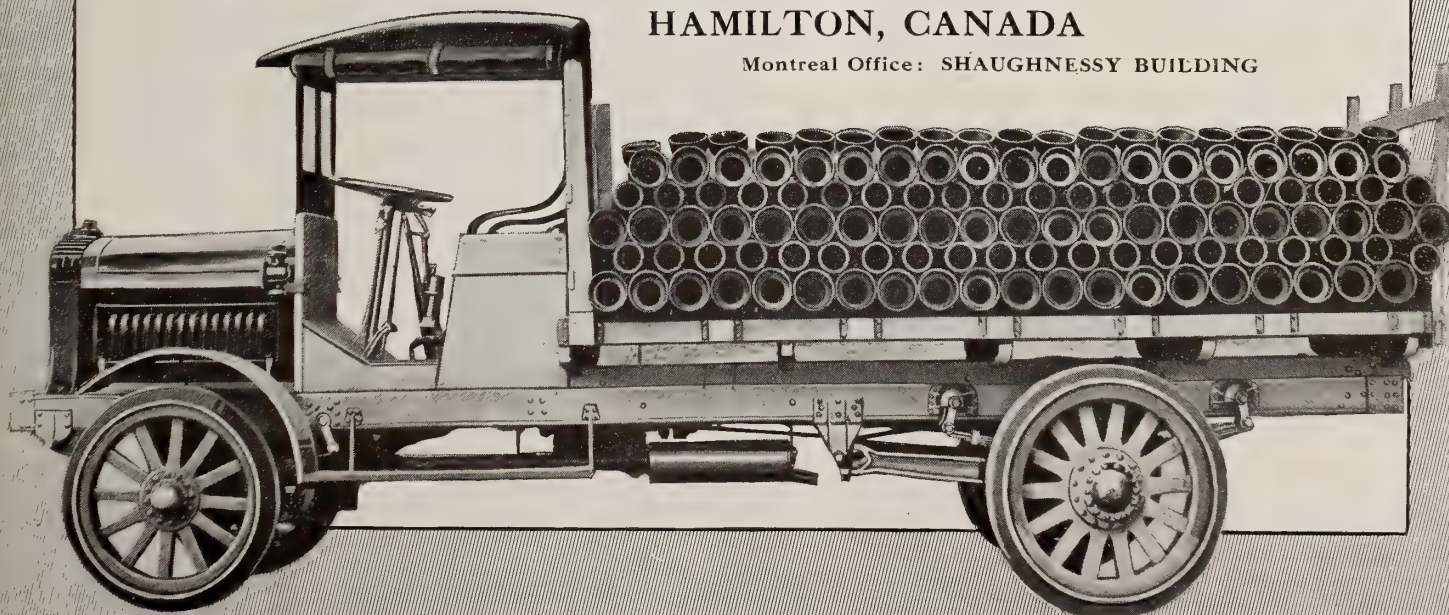
Let the NATIONAL Traffic Engineers solve your hauling problems. No obligation if you ask on your letter paper. State kind of business and where Trucks will operate. This is unusual service that we gladly perform entirely free of charge.

Address Truck Dept.

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Can supply every Canadian Manufacturer and Jobber with their entire requirements of Steel and Brass Compression GREASE CUPS, Plain, Ratchet or Leather Washer Types, any finish desired. Also all styles of Oil Hole Covers.

A NEW ONE



Hinge Lid Pressed Brass Oil Cup

With Syphon Feed, if desired. No order too large to ship from stock. Anything special you have been importing we will gladly make to your order. If your Jobber can't supply you with WINKLEY Cups write us for prices and Catalogue.

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Issues Policies of Insurance after
A CAREFUL INSPECTION OF
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OR DAMAGE TO PROPERTY
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Your present line shafting is consuming from 15% to 60% of your power.

The Chapman Double Ball Bearing will save this waste and turn it into productive energy.

They will also reduce your oiling and attention to a minimum.

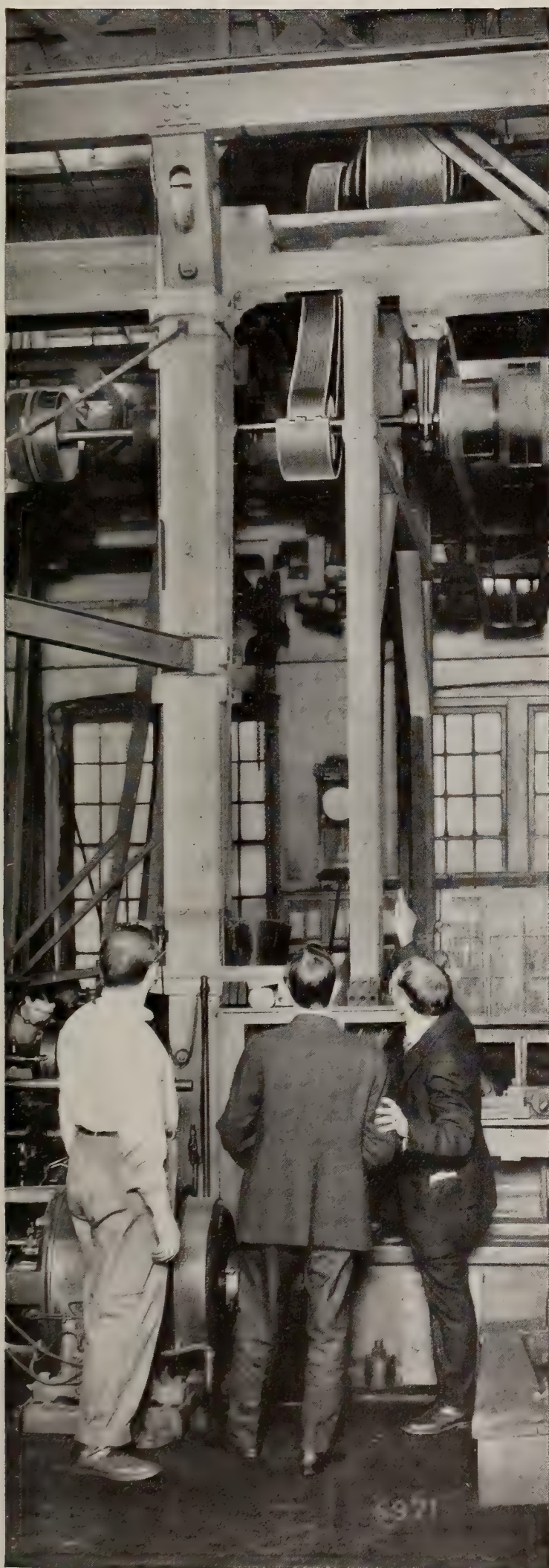
They fit any adjustable hanger and the change can be made with but little delay to you.



In use in over 2,000 Canadian Factories

The Chapman Double Ball Bearing Company
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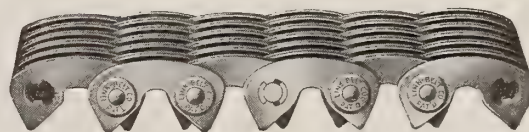
"That's an Efficient Line Shaft Drive"

All the power of the motor is delivered to the shaft, nothing lost in slippage, no time lost on account of breakage of motor belt, no need to worry about the drive. There is just enough flexibility in Link-Belt Silent Chain to protect the motor armature against shock, yet there is no possibility of slipping. Over 98 per cent. efficient.

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Power transmission is made easy by Link-Belt Silent Chain Drives, and increased efficiency in power and labor are secured. The experience of successful machine shop owners and superintendents should be a good guide to others.

The path to increased efficiency is the Link-Belt way, which is pointed out in Data Book No. 125.



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Railway and Highway Bridges, Swing and Bascule Spans, Buildings of all Kinds, Hemispherical Bottom and other Tanks, Transmission Poles and Towers, Riveted Pipe, Caissons, Barges, Turntables, Electric and Hand Power Cranes, Hoisting Appliances, Lift Locks, Hydraulic Regulating Gates, etc. Gear Cutting and General Machine Work.

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**A Modern
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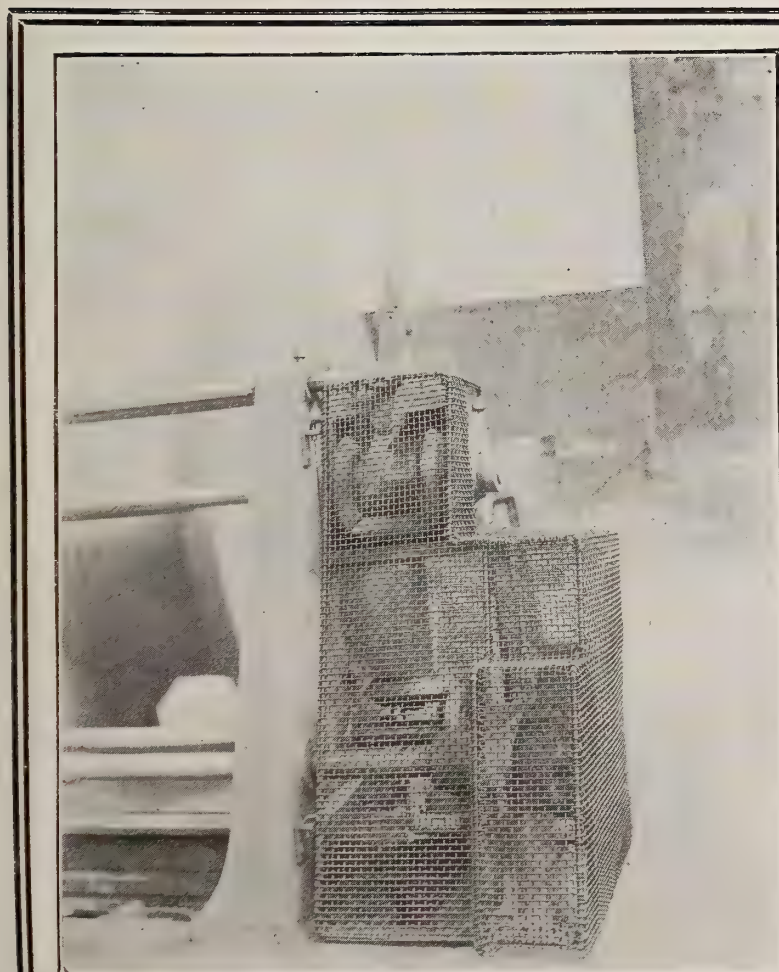
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ALWAYS USE Hammer Brand Plaster of Paris

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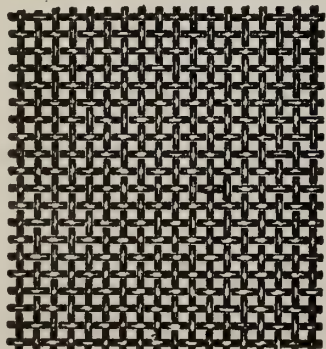
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Manufacturers of
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There is no kind of Wire Fabric required in the production of any machine or manufactured article that we cannot furnish.

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Work in all finishes.

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Save Money on Your
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**BULLDOG STEEL
JOIST HANGERS**
They never let go!
Stronger than
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"R-W" HANGERS
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Trolleys
are best for
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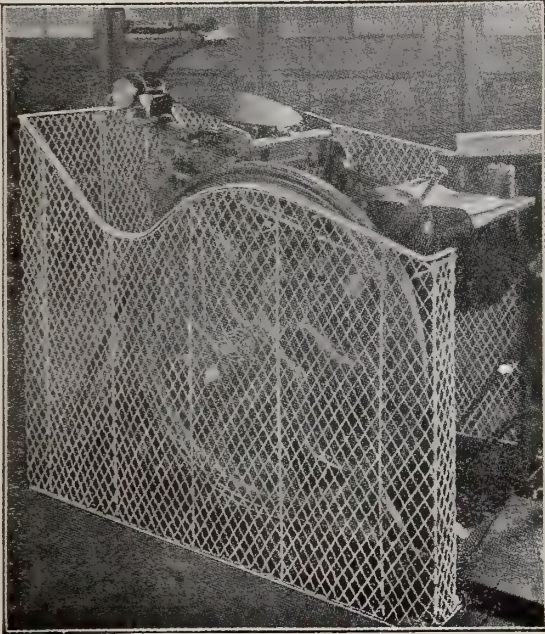
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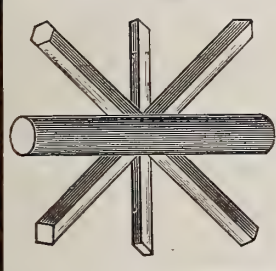
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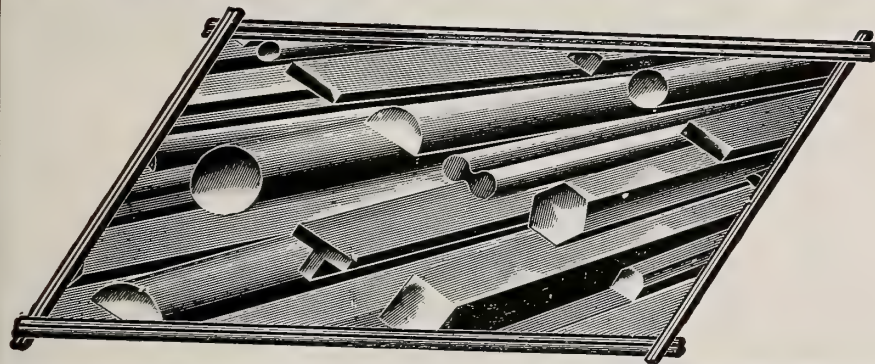
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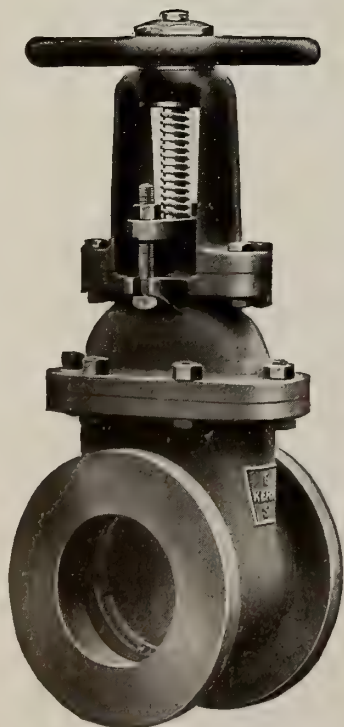
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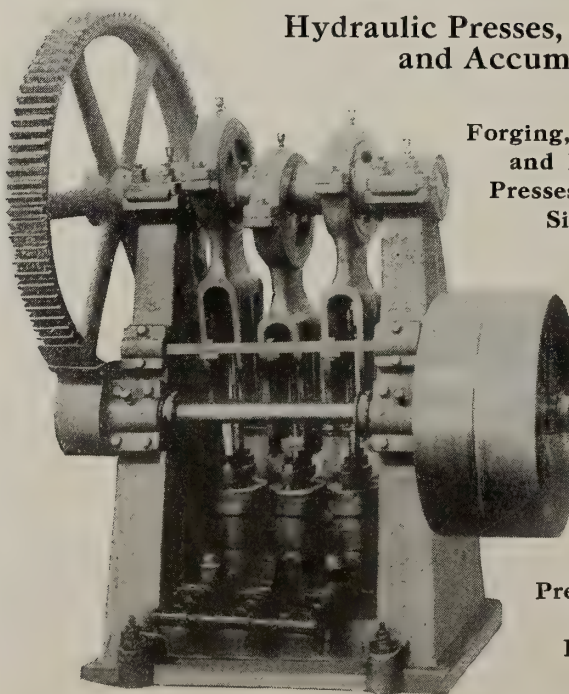
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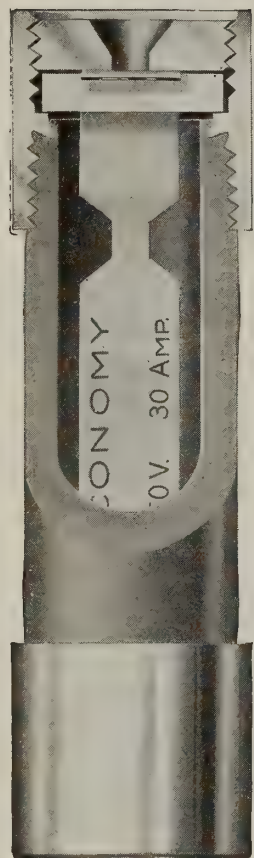
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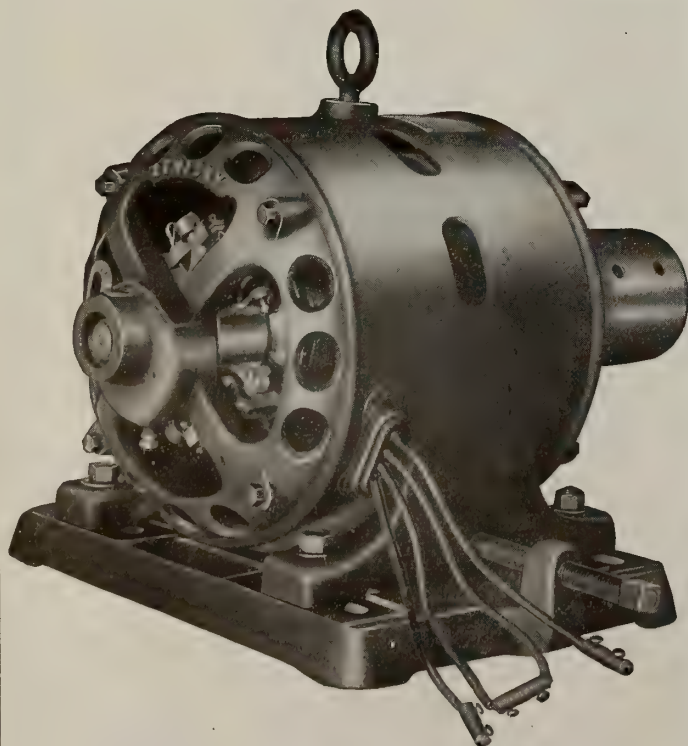
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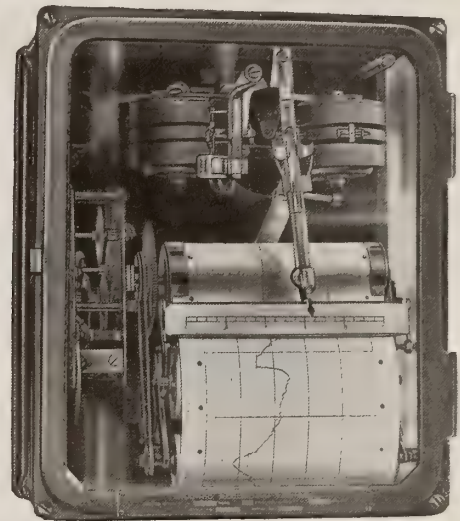
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INCORPORATED.

Vol. XVI.

TORONTO, MARCH, 1916

No. 11

INDUSTRIAL CANADA

Issued monthly as the official publication of the Canadian Manufacturers Association (incorporated), and devoted to the advancement of the industrial and commercial prosperity of Canada.

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The New War Taxes.

THE most discussed topic among Canadian business men of late has been the war tax on business profits. The Finance Minister's proposals, as embodied in the resolution which he offered to the House, were weak in spots, as was soon made apparent when the tax paying critic began to measure things up from his own particular angle. On the whole, however, they appeared to be received with very general favor. Even those upon whom the tax placed heavy obligations showed a disposition to accept the situation cheerfully, partly because they were prepared for special taxation of some kind, and partly because they instinctively felt they could trust Sir Thomas White to give them a square deal.

Agriculture is to be exempted from the scheme of profit taxing, and wisely so. Happily for the Government this exemption can be justified on sound economic grounds. The fact that it happens to be good politics is probably nothing more than a fortunate coincidence. Not that anyone would ever accuse the Government of playing politics in so vital a matter, for everybody recognizes that in any event it would be quite impracticable to tax a farmer's profits when the farmer himself really doesn't know what

his profits are. Clearly the Government had to leave the farmer out of its scheme, willy-nilly. True, some other scheme might have been devised, by which it would have been practicable to tax the farmer. For example, through an arrangement with the Provinces, the municipal machinery for taxation might have been employed to place everybody under an obligation to help, even if only to the extent of a couple of mills on the dollar. But that scheme was not the one selected. The fact that it would have been bad politics is again probably nothing more than a coincidence.

Wage earners, salaried men, small retailers, and those whose business employs only a limited amount of capital, are also to be exempted from any form of special taxation, for the present at least. Even professional men earning large incomes are to escape. In fact, the number who will be called upon to pay will represent only a very small proportion of our population, which also happens to be good politics.

For all that there will be little grumbling. Those who will have to pay are well able to pay, and will be glad to pay just because they are able to pay. For them there will be great satisfaction in the knowledge that they are really helping to win the war, and unless we are far out in our calculations, many of those in the exempted classes would feel a bit manlier and better satisfied with themselves, if they, too, were informed that the contribution of their mite to Canada's war chest would be appreciated.

The Question of Reserves.

BEFORE the Budget Speech was forty-eight hours old it was generally felt that in some respects the proposals should be modified. And it speaks well for the regard in which the Finance Minister is held by the business men of this country, that most of them took it as a foregone conclusion that some changes in the direction of greater fairness would be made.

The refusal to treat reserves as capital would have been a real injustice to many a close corporation, whose business has been conducted along lines of safe and conservative finance. Instances are by no means uncommon where family or private companies operating under old charters, that have never been changed, are employing a capital two or three times as large as the par value of their paid-up

stock. That capital has accumulated as the result of a fixed policy of putting back a portion of each year's profits into the business. While other concerns were resorting to the questionable practice of capitalizing goodwill, and making public flotations of watered stock, thus unconsciously paving the way for their exemption under the present tax proposals, these private corporations were letting themselves in for a double dose by the employment of methods that were wholly commendable. A refusal to correct this situation would have discounted legitimate finance for the sake of placing a premium on illegitimate finance, and would have encouraged extravagance at the expense of thrift.

The Retroactive Feature.

ANOTHER, and a more serious, defect in the Minister's plan of taxation is the proposal to make it retroactive in its operation. It is probably fair to surmise that this feature was suggested by the extravagant talk that has been going the rounds about enormous profits made in the manufacture of munitions, particularly in the earlier months of the Shell Committee's career, and the widespread demand on the part of the press that those profits should be taxed.

The Minister will, no doubt, contend that the retroactive clause is necessary to safeguard the revenue which the plan is expected to yield; that without it the whole scheme would fall to the ground, because of the ease with which statements could be manipulated to conceal profits. No company, of course, can tamper with statements that have been acted upon by its shareholders in annual meeting, and by demanding the production of back statements the Minister will naturally be able to place a very effective check upon all kinds of evasion. He should bear in mind, however, that no company is in a position to deal with profits once those profits have been disbursed to shareholders in the form of dividends. Under the Minister's proposal, many companies will be called upon to pay taxes on the profits of two back years, because they have had two accounting periods since Dec. 31st, 1914. The profits accruing from the current year's business may be entirely inadequate to meet these payments. In that event what are such companies to do? Endeavor to recover from their shareholders? If so, what about stock that has changed hands in the interval? Provided an ample rest account has been accumulated, it could of course be drawn upon to meet the Government's demand. But would it be altogether fair on the part of the Government to levy taxes that would have to come out of a company's reserve? And would it not be still more unfair to demand a tax on back profits from a company that finds itself with no alternative but to pay those taxes out of capital?

Cases where real hardship will be caused may be comparatively few in number, but that is no excuse for the

retention of a feature that is unjust, and that establishes a precedent which will distinctly discourage business enterprise.

Requiescat in Pace.

THE death knell of free trade has at last begun to ring in England, and over its moribund remains members of a reunited family are sinking past differences in a firm resolve to hasten its end, and give it decent burial. "Requiescat in Pace" is the devout prayer of its one-time friends and champions, and with equal solemnity its honorable foes are answering "Amen." Neither tears for a principle that is vanquished, nor rejoicings for a principle that is vindicated will mark its final passing. All are admitting that in times of peace it served its purpose, wherefore all can say with sincerity "May it rest in peace." But now all are recognizing that the stern realities of war necessitate a fiscal policy of defence, wherefore the abstract theories of a dying generation are being swept aside to make way for new policies that are dictated by expediency.

To Mr. W. A. S. Hewins, M.P., is due the credit for having driven one of the first nails into the coffin of free trade. Early in January he submitted to the House of Commons a resolution urging the Government to enter into immediate consultation with the various Dominion Governments, so as to bring the whole economic strength of the Empire into co-operation with the Allies in a policy directed against the enemy.

Speaking for the Government, Mr. Runciman, President of the Board of Trade, acknowledged the embarrassment that had been caused the country through the stoppage of such supplies as optical glass, certain chemical products, dyes and electrical apparatus, in all of which either Germany or Austria had contrived to secure a virtual monopoly. "Never again should that happen," declared Mr. Runciman. "There should be no essential article, either for the arts of peace or for the arts of war, upon which we cannot, within the Empire, lay our hands. Such progress as has been made in these directions cannot be made purely without Government assistance. Government departments can do a great deal, and I believe they ought to do more, but without the personal ability, without the training, skill and industry of the individual, nothing can be done by Government departments."

Just so, but as the *Chemical Trade Journal* so aptly puts it, "Without Government co-operation of the right kind no efforts of British manufacturers, however enterprising and persistent, will of themselves be powerful enough to withstand a repetition of German competition of the kind resorted to previous to the war."

The fact that the House was practically unanimous in according the resolution a favorable reception is weighty with significance. Even so stout a free trader as Sir Alfred Mond admitted that he was prepared to consider the resolution apart from his prepossessions on fiscal questions, stipulating as the one condition that he expected his opponents to do the same.

Chambers of Commerce Fall into Line.

TWO incidents that clearly point the way the wind is blowing will suffice to show how near to accomplishment in England is the sacrifice of free trade for a policy of tariff protection.

In Manchester, the home of Cobdenism, a free trade resolution approved by the Board of the Chamber of Commerce was rejected by the membership with a vote of two to one. At a Congress of Chambers of Commerce held in London on February 29th, with over 1,000 delegates in attendance, resolutions were carried virtually without a dissenting voice, calling for (a) preferential reciprocal trading relations between all parts of the British Empire; (b) reciprocal trading relations between the British Empire and the Allied Countries; (c) favorable treatment of neutral countries; and (d) regulations, by tariffs and otherwise, of trade relations with all enemy countries, so as to render impossible a return of pre-war conditions, and to stimulate the development of home manufactures, and the consequent increased employment of native labor.

It is quite apparent from the above that the business men of the United Kingdom are not going to be satisfied with any halfway measures of protection. It is conceivable that to all Overseas Dominions they may still be willing to hold their doors of trade wide open, but their declaration admits of no other interpretation than that they want at least three tariff schedules, one that will give allied countries a substantial preference over neutrals, and which, by being made reciprocal, will hasten the economic recovery of all concerned, another that will accord neutrals their just deserts, but at the same time stimulate home production, and secure for native labor an abundance of profitable employment, and a third that will place the goods of enemy countries under such burdens as will make their importation practically prohibitive.

It has taken the United Kingdom a long time to rouse herself from her dream of fancied industrial security. Were it not for the lessons which the war has taught her, she might still be deluding herself with the belief that commerce, not industry, was the mainstay of her strength. But at last she has seen the error of her way, and having seen it, she is going to lose no time in putting herself right. There is no suggestion in her proposals of a compromise in the shape of a revenue tariff; on the contrary, she is seemingly determined to surround herself with defensive works that will ensure for her industries the same development that similar measures of defence have secured for Germany and the United States.

Academic discussions may still be looked for in support of the theory that free trade is fundamentally sound if given world-wide application. But for the present, and for some years to come, Great Britain's fiscal policy will be determined, not by academic theory, but by stern necessity.

The Manufacture of Munitions.

THE announcement that the Finance Department, the Imperial Munitions Board and the Canadian Bankers' Association will co-operate in establishing a new credit of \$50,000,000 in Canada for War Office purposes, should be welcome news, not only for the sake of the business it will bring, but because of the evidence it furnishes that those who are in the best position to help Canadian industry are alive to their responsibilities.

It is assumed that such a credit, if established, would secure for the Munitions Board authority to place another \$100,000,000 worth of orders with Canadian munition factories. If some portion of that amount could be diverted, so as to be available for war supplies, other than munitions, the news would be of more interest to Canadian manufacturers generally, for unless all signs fail, there will be no wild scramble on the part of munition makers to get in on any new business that the Imperial Munitions Board may have to hand out.

No doubt the Board knows what it is doing, and has reasons satisfactory to itself for all it does, and we all hope that the results it is able to show, both as to costs and production, will leave nothing to be desired on the part of the War Office for whom it is acting. Man for man, Canadian manufacturers are just as loyally anxious to help win the war as the manufacturers of England. In so far as their plants can be utilized to advantage for that purpose, those plants are at the disposal of the Imperial authorities. But the ardor of Canadian manufacturers could hardly be expected to continue at fever heat, if they found themselves persistently treated as though they had been guilty of something discreditable. Nor could they be expected to enthuse over orders for munitions if they knew that they were to be paid a lower price than United States manufacturers were getting for the same article.

We do not assert that such conditions actually exist, but we do know that scores of manufacturers are alleging such conditions as a reason for their mood of righteous indignation. They contend it is not so much a question of profit, as a question of decent treatment. If exorbitant profits have been made by some manufacturers, the public will commend the Board for its zeal in reducing prices to a reasonable basis, even if its methods to that end have been arbitrary and high-handed. On the other hand, why should a manufacturer be penalized just because he has shown himself efficient in his efforts to help? Why should he be made to suffer for mistakes that really lie at someone else's door? And if his service has been honest, why should he be wheedled into admissions of dishonesty before his offers of further service are considered?

These are not idle questionings, but a softened reflection of the thoughts that are passing through the minds of scores of reputable manufacturers. Perhaps if we could read the minds of members of the Imperial Munitions Board, we could find a good deal to say on the other side.

of the question. It isn't good for Canada, nor is it good for the cause in which Canada is fighting, that there should be any misunderstandings or any antagonisms in a matter so vital as the production of munitions. The highest success can be obtained only as the result of mutual confidence and co-ordinated effort, and we hope there will soon be a get-together movement that will be the means of turning to its best account the greatest mobilization of industry this country has ever seen.

A Novel Method of National Advertising.

SOME few months ago there was established at Washington, D.C., an institution known as the Bureau of Commercial Economics. The name sounds as dry as a Bryan banquet in a prohibition state, but a glance through the literature it is sending out will speedily convince even the most skeptical that the inner sanctum of the Bureau is tenanted by a man of real brains, who likely as not flavors his ink with ginger and keeps a red-headed office boy on guard at the door.

Ostensibly the Bureau is conducted under the auspices of a hundred or so of the leading universities and colleges of the United States. That is for the purpose of giving it a standing, and in order to lend real color to the claim that its work is educational. The suspicion, however, will not down that most of the money for its operation is provided by a group of wealthy manufacturers and transportation companies, for the amount of high-class advertising given by the Bureau to United States products represents an outlay of money far too large to be capable of explanation on any other basis.

The work of the Bureau is educational in the sense that it is designed to afford regular courses of study; the work of the Bureau is sensational in the sense that its studies are sugar-coated before being dispensed to the public, and are served up as instructional entertainment with the aid of moving picture machines. To quote from the official announcement, the purpose of the Bureau is "to engage in disseminating geographical, commercial, industrial and vocational information by the graphic method of motography, showing how things in common use are made or produced, and under what conditions."

To appreciate the incidental advertising value derived by the manufacturer from this method of so-called instruction, it is only necessary to run through the syllabus of a typical reel. The one showing how brushes are made, for example, is divided into two parts, one dealing with materials used, the other with processes followed. The former is sub-divided into thirteen picture-stories, one each for bristles, feathers, whalebone, rubber, camel's hair, etc., etc. The latter is sub-divided into nine picture stories to show holes bored in the wood, tufts dipped in molten pitch, bound in thread, dipped in again, then inserted in the wood. Finer grade brushes are shown as having the tufts bound in wire and woven through the back. Lastly, there is shown the process of trepanning the back.

Naturally all these stories are more or less staged. If firm names or names of brands happen to be worked in, the audience have additional proof that the pictures are true to life. They may think nothing of it at the time, but the advertisement is there just the same.

For the sake of brevity we have selected one of the shortest films. The whole category of things in common use is similarly covered, including furniture, carpets, glassware, linens, metal fixtures, pianos, cooking utensils, stoves, shoes, underwear, gloves, hats, trunks, crockery, cutlery, and scores of other articles. Presumably in every one of these films there will be an effective advertisement for some manufacturer or some group of manufacturers, carefully concealed under the guise of instruction and entertainment.

If the course of study were limited to manufacturing processes, the real purpose of the Bureau might be too obvious. With becoming foresight, therefore, the Director of the Bureau has given a greater air of plausibility to the whole scheme by adding a series of films dealing with mineral production and plant life, the animal industry in all its phases, various aspects of commerce and transportation, together with a miscellaneous assortment of pictures illustrative of public health, welfare work and social service. For instance through the Bureau's service we may learn what are the most approved methods of city planning and street cleaning, how housing problems are being solved and how public playgrounds are being provided and supervised, what is being done for the immigrant, and the proper way to fight fires and to safeguard against them. All such picture stories depict United States methods and United States institutions under ideal conditions, and when shown in conjunction with films of United States methods of production they naturally appeal to the sense of national pride in a manner that cannot help reacting favorably upon the manufacturer who happens to be incidentally mentioned.

A Good Booster for Made-in-Canada.

FOR Canadian manufacturers the Bureau possesses a direct interest, due to the fact that its service is announced as now being available for this country. Any university, college, technical school, high school, board of trade, public library, trade convention or fraternal organization can obtain the use of any of the Bureau's films absolutely free of charge, so long as it in turn collects no admission fee from those who come to see those films displayed. If desired the Bureau will provide special lecturers to enlarge upon the subjects covered by these films, also free of charge. In other words the Bureau will utilize every opportunity to advertise United States goods in the Canadian market so long as some reputable body can be found in Canada ready to assemble an audience to view the Bureau's pictures.

In self defence, if for no other reason, Canadian manufacturers should initiate something of the kind on their own account. The present popularity of the "Made-in-

Canada" idea suggests that now would be an opportune time to provide a film service that would do for this country what the service of the Bureau of Commercial Economics seems destined to do for the United States, both in home and foreign markets. The national life of Canada offers abundant material for a well-rounded course of study in matters about which our consumers know all too little. By the moving-picture method those studies could be combined with entertainment, and the fact that they would be offered free of cost should make them exceedingly popular.

The capital expenditure needed for launching such a movement would of course be considerable, but not as much as might at first appear, for arrangements could doubtless be made whereby a great number of films would be contributed. Manufacturers in each group, for example, would gladly bear the cost of a composite film to illustrate the best methods of production employed in their trade. Federal and provincial Departments of Agriculture would probably see sufficient merit in the scheme to cause them to contribute films descriptive of ideal methods of farming and dairying. Scenic features would be cheerfully supplied by transportation companies, and so on. Accident prevention work, the elimination of wastage by fire, technical education, lumbering, mining and fishing would all appeal to people interested in such work in a manner likely to gain their support, while a vista of almost unlimited possibilities would be opened up for the Department of Militia in connection with its efforts to obtain recruits.

When one considers the cumulative effect upon the mind of an individual who attended a nearby schoolhouse, say one night a week for a year, and saw five new films each night, every one of which appealed in one form or another to his pride in things Canadian, it cannot but inspire the belief that the experiment would be well worth a trial.

Lyons versus Leipzig.

THIS month will witness an interesting contest between the Sample Fairs of Leipzig and Lyons. The former has been in operation as an annual institution for over 700 years; the latter makes its bow to the public this year for the first time.

Before the outbreak of the war, Leipzig practically had the field to itself. It was the Mecca to which traders turned every spring from all parts of Europe. The sales effected during the seven days of its continuance are said to have averaged over \$50,000,000 for a number of years past. Fur was one of the principal articles traded in, but hides, leather, wool, cloth, linen and glass were also marketed in very large quantities.

British, French, Russian and Italian traders will naturally not want to attend Leipzig's Fair this year, nor next year either, nor the year after that. Quick to realize the opportunity which the situation offered, Lyons has stepped in with a Sample Fair to be held simultaneously with the Leipzig Fair. Allied and neutral countries have

been deluged with invitations, not simply to attend but to send displays, and the readiness with which these invitations have been accepted points with certainty to the experiment being a success. Canada will be represented to the extent of perhaps half a dozen booths, and the event will, of course, be made the occasion for some unofficial, but nevertheless effective work, in the direction of bringing the two countries more closely together in matters of trade.

Meanwhile the Leipzig Fair people are making it known in the United States that they expect to be doing a very live business at the old stand, just as if nothing had happened. At the instance of Baron von Reischwitz, Acting Imperial German Consul in Chicago, the Illinois Manufacturers Association has issued to its membership this message:—

"The Annual Spring Fair (Easter Fair) will take place at Leipzig, Germany, from the sixth to the eleventh of March as in times of peace. There will be as usual a great variety of samples and a wonderful display of all kinds of goods. Every kind of comfort will be offered to the visiting public in the beautifully decorated Fair-buildings. The German industry has not been impaired very much by the war, is as productive and efficient as heretofore and the power and energy of the German commercial life are unbroken."

Nothing but the illustrious Baron's extreme modesty prevented him from adding that Americans with consignments of rubber, cotton and gasoline would be received as guests of the German Government and decorated with an iron cross.

Is State Compensation Insurance Indirect Taxation?

AN interesting side light on the constitutionality of the Compensation Acts of Ontario and Nova Scotia has recently come to our notice from Pennsylvania. That state has a compensation scheme that allows the employer certain options as to how the insurance shall be carried, among those options being the privilege of contributing to a State Insurance Fund.

Some of the coal companies doing business in Pennsylvania have taken it into their heads that they will pass along, or at any rate attempt to pass along to the consumer the cost of the insurance which the State has forced upon them. They apparently figure it out that compensation is costing them at the rate of five cents per net ton of coal mined. Consequently when invoicing a car of coal shipped, they enter the usual price and then boldly add five cents per ton, contract or no contract, and explain it as a State Compensation Tax.

The Act of course does not authorize any such procedure, nor does it appear to be a matter of common agreement among all coal operators. But if even a few of them can get away with it, they will be affording proof of what we have often hinted at, viz., that our provincial acts in

Canada are a form of indirect taxation, and consequently vulnerable to attack on the ground of unconstitutionality.

At one of his public sittings, when acting as a Commission to advise the Ontario Government in regard to Compensation legislation, Sir William Meredith is reported to have made the statement that whatever compensation it was decided to pay must eventually come out of the consumer, to whom the manufacturer would in one way or another pass the charge along. So long as Ontario manufacturers regard the assessments of the Workmen's Compensation Board as an overhead expense, and fix their selling price so as to cover that expense in the same way as they would cover fire insurance, rent, taxes, etc., it would be an exceedingly difficult matter to upset our Ontario Act by proving it was indirect taxation. But any widespread attempt on the part of Ontario manufacturers to follow the example of the Pennsylvania coal operators would put a different light on the whole matter and might lead to surprising developments.

Freight Audit Companies.

TO the average man of business, freight tariffs and classifications, with their endless supplements, rules and regulations, are a hopeless jumble. Rather than attempt to master their contents, and to keep himself posted in regard to their interminable changes, he is content to leave their interpretation to the billing clerk, and to pay what he is asked.

The wide margin for undiscovered error to which this situation gives rise, has led to the formation in the United States of numerous freight audit bureaus, and some of these are beginning to extend their operations to Canada. Their usual practice is to undertake for a company the auditing of all its freight and express bills on the basis of an annual fee plus a percentage of any overcharges for which the bureau may be able to obtain refunds.

The Railway Companies, to put it mildly, do not favor these bureaus. They claim that their own system of auditing offers the shipper every protection. Rates, they say, are a matter of law, and no deviation from those that are authorized will be permitted. They do not claim infallibility for their clerks, who they admit, sometimes make mistakes, but they do claim a high degree of efficiency for their checking systems, which, sooner or later, discover any mistakes made, and correct them.

So far, so good. But while railway companies may be soulless corporations, they have after all a lot of human nature in their make-up, and their zeal for accuracy manifests itself more in the direction of checking undercharges than overcharges. Professedly they may not favor freight audit bureaus, but their practice gives these bureaus their only chance to flourish at the expense of the shipping public.

It has recently come to our notice that some of the Railway Companies have been paying claims for overcharges to the bureaus instead of to the claimants direct. The bu-

reaus, of course, deduct their percentage, and the shippers get back only a portion of the money that has been illegally collected from them. The net result of this system is that the shipper pays a higher rate than the one which the law prescribes. It may be perfectly permissible for him to remunerate the bureau for service rendered, but the point is, why should it be necessary for him to employ that service at all? The fact that he finds it profitable to do so, points to a looseness in railway audit offices, which should be corrected. If an overcharge is collected as the result of carelessness or inaccuracy on the part of a railway employee, the expense of correcting that mistake should devolve upon the railway, not upon the shipper.

Eeny Meeny Miny Mo!

ANOTHER month has passed, and still there has been no announcement from Ottawa that would indicate the slightest effort on the Government's part to harmonize the conflict between its plans for production on the one hand and recruiting on the other.

The Department of Agriculture keeps urging the farmers of Canada to produce, produce, and to keep on producing. The Minister of Finance implores manufacturers to keep up their production, partly because he wants to get a slice of their profits, but in a greater measure because he recognizes that only by production can we as a nation meet our financial obligations. The Chairman of the Imperial Munitions Board keeps clamouring for deliveries, and threatens delinquents with cancellation of their contracts unless they speed up. And all the while the Minister of Militia goes serenely on his way taking indispensable men from the farm, from the workshop and from the munitions factory, regardless of the havoc he creates with our national machinery for production.

If the Government's inaction were due to failure to appreciate the seriousness of the situation, then they would be branded as unfit for the responsibilities that have been entrusted to them. But we do not believe anything of the kind. They know, they must know the straits to which manufacturers are already being reduced in coping with this problem of production. Unless they are devoid of imagination they must also realize that things will grow far worse before they begin to get better, because thus far the Minister of Militia has secured only half the men he has set out to secure. They have also been shown evidence pointing to the probability of a drop this year of \$300,000,000 in Canada's agricultural production, due to the inroads which recruiting officers have made on farm labor. They cannot contemplate that with very much satisfaction. But still they hesitate to apply the remedy which they know to be the proper one, and which sooner or later they have got to come to. Why?

If it's votes they're afraid of it would seem pertinent to remark that men who are so easily scared from following the path of plain duty are a mighty poor outfit to direct Canada's end of the campaign to hunt the Huns.

THE BUREAU OF EXPORT INTELLIGENCE

An Outline of the Plans now being made by the Department of Trade and Commerce for its Establishment

By ARTHUR FORD

THROUGH the medium of the weekly Bulletin of the Trade and Commerce Department, Sir George Foster recently announced that he was contemplating the establishment of a Bureau of Practical Commercial Export Intelligence. As a start there will be an exhibit of foreign-made toys held in Toronto this month. Mr. Watson Griffin, of the department, who recently made an extensive and comprehensive report on the development of trade with the British West Indies, will be in charge, and has been making the preparations for the exhibit. A quantity of German toys was purchased in New York, and the department also secured a display of Bohemian toys. These will be open for examination to manufacturers and all interested in the possible development of a Canadian toy industry. As far as possible there will be available information as to material, methods of manufacture and cost of production. The exhibit will later be shown in other Canadian cities and will probably be finally located in Ottawa to be made the nucleus of a permanent commercial exhibit.

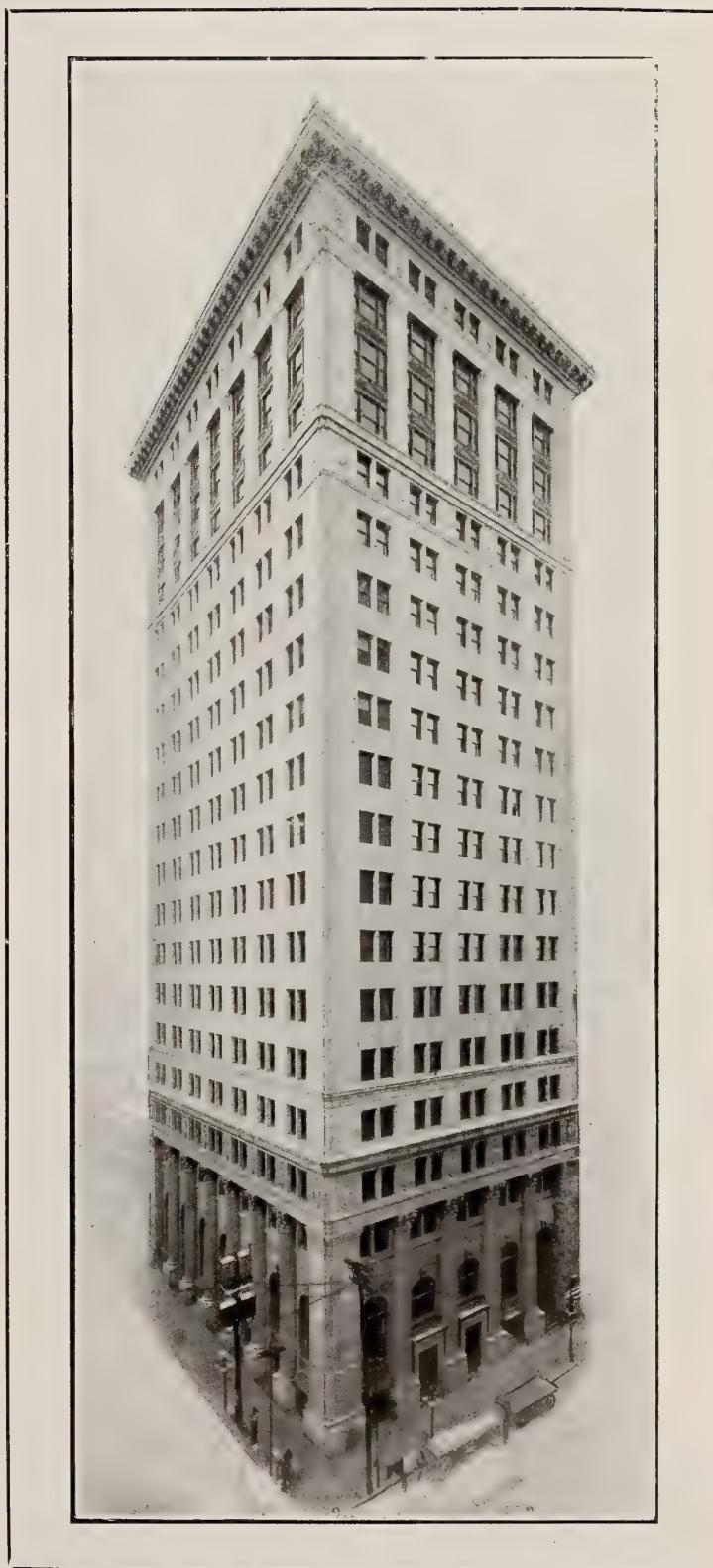
This announcement means an important forward move by the Department of Trade and Commerce in Canadian commercial development. For several years many Canadian manufacturers and boards of trade have been strongly urging upon the government the adoption of some such scheme. About a year ago an influential deputation waited on Sir Robert Borden and Sir George Foster and urged the establishment of a commercial museum along the lines of those in existence in Belgium, Germany and other successful commercial exporting nations. The success of the Belgian exhibits was particularly emphasized. It is understood Sir George Foster made a thorough study of the subject at that time. The chief objection was the initial expense. However Sir George did not drop the idea and he has been continually working on the scheme. Mr. Richard Grigg, the late Commissioner of Commerce, gave the subject a great deal of study, and it was shortly before his death the present initial plan was adopted. It was decided to make the present start with the idea of its being the basis for a permanent exhibit and bureau of commercial intelligence.

Details to be Announced Later.

The general plans are being worked out at the present time, and an announcement will be made shortly as to the details of the scheme by Sir George Foster. The Minister of Trade and Commerce objects to the name museum—he thinks it sounds too dry and dead—so the high-sounding name Bureau of Practical Commercial Export Intelligence has been selected.

Following the display of toys—if it is a success—it is planned to have exhibits of other lines of products, which it is felt can be successfully manufactured in this country both for foreign and domestic consumption. These will be shown in various industrial centres, and later those of permanent value will be housed in Ottawa. It is the intention to make it something more than a mere commercial museum, for it is hoped that it will become a bureau of real value to the Canadian commercial world. The plans are still indefinite, but it will likely be made a branch of the Department of Trade and Commerce. It is the intention to make an exhaustive

catalogue of all information with regard to material entering into the manufacture of such articles, market prices, methods of manufacture, cost of transportation, best methods of packing and shipping, etc.



ROYAL BANK BUILDING, TORONTO

In which the Toy Conference will be held on March 28

Japanese Plan as a Model.

The methods of various countries were studied in formulating a policy for Canada. While the Minister evidently does not intend to slavishly follow the policy of any particular country, it would appear as if the Japanese plan was being used to a certain extent as a model. Sir George Foster visited Japan a couple of years ago and was much impressed with the aggressive plans of the Flowery Kingdom to capture foreign trade. Japan has what is known as an Imperial Commercial Museum under the department of Agriculture and Commerce at Tokio, Japan. It was established as long ago as 1896, with the object of encouraging Japanese foreign trade. The objects of the Japanese Museum are best set forth in the following quotation from an official Japanese document, outlining its lines of work:

1. This Museum keeps on exhibit foreign and Japanese trade samples and articles of reference.
2. This Museum accepts the request of foreign and Japanese merchants and manufacturers to keep on view in its premises and to introduce them to the public.
3. This Museum keeps up correspondence with various commercial and industrial bodies at home and abroad, and exchanges printed matter with them, besides undertaking the loan and distribution of commercial samples and articles of reference.
4. This Museum undertakes to meet requests relating to enquiries and reports on commercial and industrial conditions in general, and also to furnish all possible facilities in these connections.
5. This Museum gives lectures on commercial and industrial subjects.
6. This Museum aims at promoting the reform and development of the quality and design of articles of commerce and also of the draughts, exhibition and decoration relating thereto.
7. This Museum collects and keeps on view all kinds of publications relating to commerce and industries at home and abroad, and also of commercial catalogues issued at home and abroad.
8. This Museum issues a museum bulletin containing reports and correspondence relating to commerce and industries at home and abroad.

The Toy Conference and Exhibit.

Regarding the exhibit of toys in Toronto, the Department of Trade and Commerce announces that arrangements have been made to hold it in the Royal Bank Building, beginning on Tuesday, March 28. The Department has the assurance that a large number of Canadian toy makers will send exhibits, while all the large department stores and a number of wholesale houses have promised to have representatives present. A conference of those interested will be held on the 28th, after which it is proposed to keep the exhibition open for about a week. In order that everything may be in good order before the opening, exhibitors are being asked to have their toys at the Royal Bank Building not later than March 21.

OF PERSONAL INTEREST.

Sir Lyman Melvin-Jones, president of the Massey-Harris Co., Limited, Toronto, has been elected to the board of the National Trust Company.

Frank P. Vaughan, manager of the Vaughan Electric Company, Limited, St. John, N.B., was recently elected a member of the American Institute of Electrical Engineers.

Harry Cockshutt, president and managing director of the Cockshutt Plow Co., Brantford, has been made lieutenant-colonel in the overseas forces, and will command the 215th Battalion.

W. S. Chase, for thirteen years at the head of the sales department of the National-Acme Manufacturing Company, Cleveland and Montreal, has resigned. For the present he will devote himself to personal affairs, and will spend much of his time at his ranch at Meridian, Idaho.

W. A. Matheson, general manager of the Lake of the Woods Milling Co., has been elected a director of the Monarch Life Assurance Co., Winnipeg.

G. S. Kilbourn, of Calgary, who has been in Owen Sound for some time, has accepted the position of managing director of the Canadian Malleable Iron Company, and will in future reside in Owen Sound. Mr. Kilbourn is an ex-president, having lived in Owen Sound up till six years ago, when he moved West to look after the interests of the Canada Cement Company in the West. He was at one time secretary-treasurer of the Portland Cement Co., and was interested in other manufacturing enterprises.

Walter B. Ramsay has succeeded his father, the late Alexander Ramsay, as president of A. Ramsay & Son Co., Limited, paint manufacturers, Montreal.

N. R. Feltes has been appointed general manager of the Ames-Holden-McCready Co., Montreal. Heretofore D. Lorne McGibbon, in addition to acting as president, looked after the details of the manager's work.

Frank G. Wallace, of Pittsburg, Pa., for many years a director of the Canadian Locomotive Company, Kingston, Ont., has accepted the position of managing director of the company, and William Casey, who has held the position of assistant general manager, has been promoted to be manager. The changes were occasioned by the resignation of A. W. Wheatley, who has become president of the Lima Locomotive Corporation, Lima, Ohio.

D. H. McDougall has been appointed general manager of the Dominion Steel Corporation. In 1909 Mr. McDougall was appointed assistant general manager of the Dominion Coal Company. The production of the collieries was largely increased under his management and in 1912 he was appointed general manager of that branch of the service. Mr. McDougall is a Nova Scotian, and began his career in the service of the Dominion Iron and Steel and Dominion Coal Companies.

John Collins has been appointed general manager of the Canadian Steam Boiler Equipment Co., Toronto, manufacturers of the "Cyclone" shaking and dumping grate bar. Mr. Collins was formerly supervising engineer with Gillespie Bros., Toronto.

A. G. McIntyre has resigned as manager of the pulp and paper division of the Bathurst Lumber Co., Bathurst, N.B., and has become manager of the four-million dollar Mattagami Pulp & Paper Co., which will build a sulphite pulp mill on the Mattagami River in Northern Ontario. Mr. McIntyre has been succeeded at Bathurst by J. H. Thickens.

George H. Mead has succeeded W. E. Stavert as president of the Spanish River Pulp and Paper Co. Mr. Mead, who is also head of the Mead Pulp and Paper Co., Dayton, Ohio, came to Canada several years ago, and founded the Lake Superior Pulp and Paper Company, of which he became vice-president and managing director. When this was absorbed by the Spanish River Pulp and Paper Company he became vice-president of the larger concern and now succeeds to the presidency following the resignation of Mr. W. E. Stavert.

THE POWER FAMINE AT NIAGARA FALLS

What is Canada's Interest in a Further Development of Electrical Energy There?

N ECESSITY for bringing about a condition of economic and industrial independence is driving the United States towards the point where further development of Niagara power is becoming absolutely imperative. At two meetings last month of sections of the American Electrochemical Society, one held at Niagara Falls and the other at New York, addresses were delivered which showed conclusively that from the United States standpoint at any rate, there would have to be considerably more power developed at Niagara Falls if the work of providing the requisite domestic supplies of basic chemical products was to be extended further. As one speaker put it, "In any programme of industrial preparedness and self-containedness, chemical preparedness and chemical self-containedness play a big part, and its crux is more Niagara power."

After grasping the import of two or three of the addresses delivered at these meetings, which are reproduced herewith, Canadian manufacturers may well ask what interest the Dominion should take in a question which certainly has an international, as well as a national aspect. If the United States has reached its limit of production under existing conditions, is there not an opening here for an immediate development by Canada of certain electrochemical industries which will provide a part at least of the chemical products now in strong international demand?

First, there is the address of Albert H. Hooker, works manager of the Hooker Electrochemical Co. of Niagara Falls, N.Y., who dealt primarily with "New War Products." This is what Mr. Hooker said in part, and it is well worth reading:

One evening at Niagara Falls it was my fortune to sit next to an attorney (Mr. Scovele), who told me that some years ago he had been commissioned to visit London and place with a group of financiers an early issue of bonds of the Ontario Power Company. He was asked by these financiers what use his principals proposed to make of this development of about one hundred thousand horsepower. His reply to their question impressed me, for he stated that "when the Niagara Falls Power Company started their tunnel (about 1891), not one of the companies now using that power was in existence, and not only that but not one of the products now made by those companies, through the use of that power was then known to commerce."

This statement, sweeping as it sounds, is nearly true, for aluminium, carborundum, alundum, silicon, artificial graphite, calcium carbide, cyanamid ferrosilicon, ferrochromium, ferromanganese, along with electrolytically produced caustic soda, sodium, chlorine, chlorates, chloroform, carbon, tetrachloride, etc., are all commercial products of the last twenty-five years, most of them having been developed through the impetus given by this Niagara Falls power development. The few that were made earlier were little more than chemical curiosities.

Cannot these be rightly spoken of as "new war products?" Certainly they played no part in the munitions, armament and equipment of our Civil War nor the war of 1870. But in what sorry plight would any manufacturing country be to-day, and particularly either side of the present warring nations, without these materials!

Their Part in War.

Carborundum, alundum, aloxite, crystolon are all artificial abrasives used in modern grinding machinery for the manufacture of automobiles, guns, shells, shoes, armor plate and for the grinding of tools. There was hardly an industry where the tremendous decrease in production and increase in cost would not be felt were they without these artificial abrasives produced by the electric furnace at Niagara. Ferrosilicon, ferromanganese, ferrochromium, ferrotitanium, ferrotungsten and ferromolybdenum are all products which have become

necessities in the steel furnaces of today, to the point where possibly 75 per cent. of the steel production of the United States is dependent upon the products from the electric furnaces of Niagara Falls. What would we do in the way of modern open-hearth steel without ferrosilicon, or armor plate without ferrochromium, to say nothing of high-speed tool steels and all they mean for modern machinery manufacture, whether these machines are sewing machines, automobiles, agricultural machinery, steam engines, pumps, cannon or shells? England's embargo on ferroalloys would have crippled the industries of this country in a far more serious manner than the loss of all the German dyes, had not one of the companies at Niagara been able to divert a large block of power from the production of calcium carbide to the production of ferrochromium, ferrosilicon, etc. And still this would not have been possible were not the electrochemists, engineers and operatives already at hand and skilled in the art; and further this might not have been possible without additional power development had we needed at the same time, as Germany does today, every last ounce of carbide for the fixation of nitrogen.

Caustic soda is all-important in the manufacture of soap, for the refining of oils, the mercerizing of cotton to produce artificial silk and a hundred familiar uses, yet it takes on additional importance today when we think of caustic melts in the production of dyes, the manufacture of picric acid and other nitro explosives. Sodium we seldom see, and are likely to connect this substance with a few lecture experiments, yet metallic sodium made at Niagara Falls forms the basis for all the cyanide in which so many of our minds depend for the recovery of the precious metals. When the German supply of cyanide was cut off, it looked for a time as if many mines would have to close. Here again an increase in production made possible a restored balance, and fortunately a little power was available for the purpose.

Dependent on Niagara.

Upon bleaching powder, liquid chlorine and hydrochlorites we depend for the bleaching of our cotton cloth, the bleaching of wood fibre for the production of book paper, the sterilization of water supplies of many of our cities, thus preventing typhoid fever, dysentery and other diseases. The electrolytic plants at Niagara Falls form the centre of this important industry. They, as well as all other electrolytic plants in the country, are dependent upon Acheson graphite made at Niagara Falls for their graphite electrodes. These chlorine products have all taken on a new interest, liquid chlorine as a means of offense and defense, chlorinated benzol, etc., as necessary intermediates for the production of dyes and explosives. Are these new plants and the knowledge and skill required to operate them—experience obtained at tremendous cost—to be scrapped and lost after the present crisis is over? Or, are we to continue the operation along the line of peaceful, constructive manufacturing, increasing our skill and knowledge and retaining a skilled force of workers, chemists, engineers and operatives? Much will depend on the policy of our government.

Is not Germany, with her supply of Chilian saltpeter cut off, absolutely dependent upon the fixation of nitrogen by the electric furnace, the electric arc or the use of electrolytic hydrogen for all of her nitro explosives? Were it not for her foresight in considering this eventuality and subsidizing the development of the nitrate industry in Norway with its cheap water power, and then carrying the development work to a point where in an emergency like the present even power produced from coal could for the time supply her needs for nitric acid from internal sources, how otherwise could she stand today with England's fleet in command of the means of communication with the Chilian saltpeter deposits?

A New Proposal of Niagara Falls Power Development.

What are we doing today to supply our needs in a like emergency? I have a remedy to propose, and one which I feel it a duty to urge, for your earnest consideration.

As this was written, I saw from my window the waters of the Niagara River flowing by with a capability of being de-

veloped into perhaps five million horsepower—the most uniform and constant water power in the world. I am very fond of the impressive beauty of its mighty falls and the wonderful gorge and rapids below, and only as a last resort in the event of a *national defense necessity* would I do anything to injure that landscape. Such injury, however, is not necessary. As I study the daily moods of the falls, I see the ebb and flow of water due to the direction and velocity and wind on Lake Erie, making far greater difference in the volume of water passing over the brink of the falls than is caused by the present diversion of water producing some five hundred thousand horsepower. I also see that the beauty of the falls is not at its best when the largest volume of water is passing over its brink. From careful study I am satisfied that well over one million horsepower more could be diverted, and not an iota of injury would be done to the scenic grandeur of the cataract if a little engineering skill were used in placing brakes and deflectors. If this is true, think of the tremendous increase in national efficiency and preparedness this development would mean. Arrange now with Canada for a development of water power at Niagara three times as great as at present—the time is ripe.

For every one hundred thousand horsepower diverted, provide that say ten thousand horsepower shall be devoted to the fixation of atmospheric nitrogen. The more varied the methods used the better. Make Niagara the commercial research laboratory of the nation in this field by supplying private enterprise with power at nominal cost for this purpose. Under these conditions, power, even if developed by private enterprise in large amounts, could in the above percentage be supplied as cheaply if need be as Norwegian power, and would be infinitely better adapted and centralized for the purpose. Such power would be within a night's ride of Washington, New York or Chicago. Already located at Niagara is the largest group of electrochemical workers in the world. Such development would double their number. Is it through lack of foresight or "a dog in the manger policy" that some of our largest and most important electrochemical industries are even now compelled through lack of cheap power to go to Norway and other fields, there to start the training of a foreign army of electrochemical workers upon foreign soil, while unused water which could be utilized without injury goes to waste?

The Cyanamid Industry.

Then, as a sidelight, consider what W. S. Landis, chief technologist of the American Cyanamid Co., had to say about Germany's wonderful war-time development of the cyanamid industry, remembering incidentally that when his company established its plant it had to locate on the Canadian side of the Niagara River in order to get adequate power.

As a matter of record Germany at the outbreak of the European war possessed three cyanamid factories with a combined capacity of but little over 50,000 tons of cyanamid per year. There were then no arc processes at work in the country, and the Haber process was producing a comparatively small quantity of sulphate of ammonia.

In contrast with this Germany has today a production on an annual basis of almost 500,000 tons of cyanamid, and nearly 10,000 tons of arc-process nitric acid, all of which has been built and set into operation within eighteen months. Even the Haber process has been considerably increased in capacity, though the plant at Opau suffered greatly, though indirectly, from an aeroplane visit. The present German investment in these atmospheric fixation processes is now over \$100,000,000, and Germany is enabled to meet not only its agricultural requirements for nitrogen, but its munition demands as well. In other words, Germany is now fixing atmospheric nitrogen in quantity such as to replace the entire importation of nitrogenous materials amounting annually to approximately 850,000 tons of nitrate of soda and 40,000 tons of nitrate of lime plus an indefinite amount of Norwegian cyanamid amounting probably to 20,000 tons annually. The munition plants are consuming nitric acid at a rate of 250,000 to 300,000 tons per year in addition to the above agricultural and manufacturing requirements.

Germany at the outbreak of the European war had no commercial plants oxidizing ammonia, though the processes now in use were then fairly well developed. It was not until after the beginning of the war that these processes were put to work on a large scale, and the tremendous amount of nitric

acid required to maintain her powder supply is now almost exclusively obtained from these oxidation processes.

These figures are certainly impressive, illustrating what eighteen months can do towards meeting an emergency if the necessary funds are forthcoming and an intelligent organization directs their expenditure. We can well appreciate that this great feat was accomplished only by terrific strain upon the technical staff which had charge of the work, and undoubtedly at an extravagant cost.

The manufacture of cyanamid on this side of the Atlantic is conducted in Canada under American direction. It is carried on at a higher efficiency than in the German plants and a higher grade product is made. Our transformation into ammonia is at an equal efficiency to theirs, and the operation is conducted with less men and with a simpler form of apparatus.

We further have in this country intimate knowledge of the design and experience in the operation of the successful ammonia oxidation process, and it will only be a matter of a short time now when a fair-sized plant will be producing nitric acid from cyanamid by this process in the United States. There are no problems concerned herewith, the solution of which is not now resident in the United States, and, therefore, we feel that this country is today in as good if not a better position to supply its own nitric acid for munition purposes than Germany was at the beginning of the war in July, 1914.

Dependence on Niagara Power.

Finally read F. J. Tone's address on "Niagara Power and Self-Containedness," which elucidates the whole situation most clearly.

If the year 1915 has shown us one thing more clearly than another, it is that a nation must be economically and industrially independent. Some of our economists have told us from time to time that a nation should not strive to be self-contained, that America should confine itself to the development of its most abundant resources, for example, those of agriculture, lumber, coal and the heavy manufacture of iron and steel, and that we should let Germany supply us with our potash, dyestuffs and fine chemicals, England with our ferromanganese and Chile with our nitrates.

The year 1915 has shown us to what economic distress such a policy leads. We have seen crude potash advance from \$35.00 to \$400.00 per ton—a point where its use as a fertilizer has practically ceased. We have seen England place an embargo on ferromanganese and the price advance from \$38.00 to \$125.00 per ton. Magnesite, the basic refractory of the steel manufacturer, has become almost unobtainable, and the same may be said of numberless commodities, including emery, barytes, carbolic acid, crucible graphite, platinum and dyestuffs.

I wish to point out a few ways in which the whole question is bound up in Niagara power, and to show the paralysis of industry that would follow if the electrochemical companies of Niagara Falls could not continue to meet the call that it made on them. Few realize how many industries are directly dependent on chemistry. Still less has it been realized to what extent our great basic American industries depend on electrochemistry, and specifically on the electrochemical products of Niagara power.

I first wish to mention the steel industry. The manufacturers of steel, the greatest of all American industries, are today absolutely dependent upon Niagara power by reason of its requirements in ferro-alloys, such as ferrosilicon, silicon metal, ferrochrome and ferrovanadium. In 1915 there was produced in this country about 28,000,000 tons of steel, 20,000,000 tons of which was basic open-hearth steel, and in 75 per cent. of this there was used as the main deoxidizing agent high-grade ferrosilicon produced in the electric furnace by Niagara power. All ferrosilicon made by electric furnaces in America is now produced from Niagara power. It is an absolutely essential element in 15,000,000 tons of steel.

The most striking example, however, of the intimate relationship between the metal working industries and Niagara power is that of high-speed steel. The essential alloys in the manufacture of high-speed steel are ferrochromium, ferrotungsten and ferrovanadium. All these are produced in Niagara and they are also made elsewhere by the use as reducing agent of metallic aluminium, likewise a product of Niagara power. If the supply of high-speed tool steel were cut off there are hundreds of metal working industries where the output would be reduced to 25 per cent. of their present rate.

Ferrochrome and Armor Plate.

Ferrochrome is also the hardening element in armor plate and armor-piercing projectiles, and not a battleship is afloat but what has many tons of it in her armor; yet up to three years ago we were dependent on Europe for one half of our supply.

In other special steels, such as silicon steel or electrical transformer steel, we also find an almost total dependence on the products of Niagara power.

The abrasive industry is one intimately connected with industrial life. Without adequate grinding materials the most important industries of the country, including the manufacture of automobiles, agricultural machinery, steel and malleable iron, marble, granite and all finished products of iron and steel, would be greatly handicapped and in cases their output would be reduced to a fraction of their present rate. The abrasive situation today is another striking illustration of the dependence of industry on Niagara power.

Abrasives are of two kinds; the natural abrasives, which are Turkish and Grecian emery, and the artificial abrasives, such as carborundum, alundum and aloxite. Ten years ago artificial abrasives represented 22 per cent. of the total consumption. In the year 1914 they represented 55 per cent. Since the war, however, the mining of emery has almost ceased. Not a pound of Turkish emery is being shipped and shipments from Greece are negligible.

There are four artificial abrasive plants operating with Niagara power and they produce all the artificial abrasives used in this country. Their annual output is about 20,000 tons. If this supply were cut off a partial paralysis would follow throughout the metal working industries.

As an example, take the automobile industry. One of the big western manufacturers plans during 1916 to put out 1,000 cars per day. In the factories of that company grinding machines form about 25 per cent. of the tool equipment. The crank shafts are roughed and finished with grinding wheels, the cylinders are bored with grinding wheels, balls and ball bearings cannot be produced without grinding wheels. It takes 500 wheels per month to grind forgings alone. If we could conceive that these works were forced to go back to the grindstone and were at the same time deprived of high-speed tool steel, aluminium, oxyacetylene welding and other products produced by Niagara power, it is not an exaggeration to say that their output would drop from 1,000 to 100 cars per day, with the same plant equipment and the same number of workmen. The cost of the car would be multiplied by ten, which simply means that there would be no automobile industry.

Consuming Most Power.

Aluminium and calcium carbide, the largest of the electrochemical industries from the point of the power consumed and value of the products, were first made possible by Niagara power, and on these products, as well as other Niagara products, such as bleaching powder, alkali, chlorine, phosphorus, graphite, sodium and cyanides, depends a whole line of America's basic industries.

Today nitrogen products are unquestionably the most important products in the field of chemistry. Without them modern warfare, as we know it, would be impossible, because they are an essential element in every explosive.

The success of Germany in making herself independent of Chilean nitrates in a single year is an industrial achievement of the highest order, but nitrates are not merely a war product. They are necessary in the life of an agricultural nation at all times and, as a matter of common foresight, the production of artificial nitrates should to-day be made an established industry in America. This does not mean that we should at once produce all the nitrates required but partial development should be encouraged, which would enable the industry to be perfected in its chemical and technical organization so that it could meet any natural or political emergency. This at once calls for cheap electrical power in the centre of good transportation facilities, and, in brief terms, it means that we must have Niagara power in large amounts and at low cost.

The only nitrogen fixation works operated by Niagara power is the American Cyanamid Company, and this pioneer industry was forced to go to the Canadian side to obtain sufficient power. America has 25,000 horsepower devoted to nitrogen fixation and Europe over 300,000 horsepower. We are startled when we are told that for the spectacle of Niagara we are paying the price of a million tons of coal a week. I

believe it is more startling to put this in terms of America's food supply. If Niagara was devoted to the production of nitrogen fertilizer it would produce sufficient nitrogen for 3,000,000 bushels of wheat per day.

PULP AND PAPER MANUFACTURERS' CONVENTION.

In point of attendance and interest, the third annual convention of the Canadian Pulp and Paper Association, held in Montreal on February 10, was the best in the history of the organization. Frank L. Moore, president of the American Paper and Pulp Association, and G. F. Steele, Secretary of the Newsprint Manufacturers' Association, were interesting visitors from across the line, who contributed not a little to the success of the gathering.

In his presidential address, I. H. Weldon, president Provincial Paper Mills Co., Toronto, pointed out that the industry was in a fortunate position in that it was unnecessary to manufacture war supplies in order to keep the mills running. Exports had been largely increased during the year and imports considerably decreased. The future outlook was good, in spite of increasing costs and a shortage of certain materials used in the manufacture of special grades.

The important work of the year had been the fight before the Railway Board to prevent an increase in freight rates. In this fight, splendid service had been rendered by A. D. Huff, the tariff expert of the Laurentide Company, who had worked night and day preparing the case for the Association.

Mr. Huff himself addressed the Association during the convention on freight rate problems, giving a clear elucidation of the subject. Another valuable address was that of A. G. Pounsford, paper expert of the Champion Fibre Co., Canton, N.C., who is to be the expert of the Ontario Papermakers' Safety Association under the Workmen's Compensation Act.

In the election of officers, J. H. A. Acer, Laurentide Co., was chosen president, and C. Howard Smith, Howard Smith Paper Mills, vice-president.

PNEUMONIA.

An appalling number of deaths have occurred from pneumonia in Illinois, especially in the congested centres of population, in the last week, says *The Manufacturers' News*. Pneumonia is a poor ventilation disease. Get all the fresh air you can. Keep the windows open. Impress upon employees the importance of fresh air. The pneumonia germ can't live in fresh air. People keep their houses at conservatory temperature. Then they go out in a lower temperature, become chilled and the pneumonia bugs, lurking wherever the air is bad, in crowded public places, catch them. In a few days it frequently is all off with the victim. It catches prosperous manufacturers and hard-working mechanics, the professional and the laborer in the streets. Pneumonia respects no one except the man who gets plenty of fresh air and ventilates his house.

What economy means has been put in concrete form by the Chicago Great Western railroad, which has recently compiled facts to show what may be compassed in saving the little things. The following items show what must be done in service, expressed in haulage of one average ton of freight, to produce the value of the articles mentioned when lost or ruined:—

Two-cent postage stamp, equivalent to hauling a ton of freight 3½ miles; lead pencil, 2 miles; track spike, 2 miles; track bolt, 3½ miles; one pound of waste, 10½ miles; white lantern globe, 20 miles; red lamp globe, 75 miles, lamp chimney, 10½ miles; station broom, 35 miles; water pail, 20 miles; track shovel, 90 miles.

THE ONTARIO SAFETY ASSOCIATIONS

Progress of an Important Development under the Compensation Act

IT is now nearing the time when the safety associations, organized last year under the provisions of the Ontario Workmen's Compensation Act, can take another forward step. The preliminary work of instituting a survey of the individual industries in each group is about complete and recommendations for the adoption of rules which will be standards to govern machinery and practice in the respective groups will soon be laid before the membership of each.

It will be recalled that the safety associations came into existence in the first place because it was felt that prevention was a very necessary adjunct of compensation legislation. After an accident happens and a workman is injured, compensation comes as a blessed relief, but that is not to say that the necessity for paying compensation is not an evil. Reduce the number of accidents, cut down the huge bill for compensation, and a greater good is rendered than by any amount of relief work after the damage is done.

Survey of Plants.

The first task of the associations was to carry out a complete survey of the plants of their members. Basic information as to conditions existing in each had to be secured before any definite standards could be either recommended or adopted. These preliminary investigations served one good purpose, even at the outset, and that was to bring to light certain anomalies. The fact that members of each group of industries were called on to pay the same rates, pre-supposed a fairly close approximation of working conditions. It was found, however, that in certain cases industries of considerably greater hazard were included with industries of less hazard. These discrepancies were brought to the attention of the board and equalizations were made.

By way of example, in the printing group, there were found to be included wall paper manufacturers. Now the risk of accident in the wall paper industry was found to be considerably greater than in the ordinary printing office, and so a recommendation was made to the Board that some steps should be taken to differentiate the rates.

In some instances, however, it is found advisable to remove industries from one group to another. This was done in the case of felt hat manufacturers, who were taken from the wearing apparel group and attached to the textile group. It was also done in the case of manufacturers of brooms and brushes, who were transferred from the textile group to the woodworking group, and in that of tent and awning manufacturers, who were shifted from the textile class to that of wearing apparel. All these changes, which, it must be admitted, have been quite justified, have been brought about as a result of inspection.

Definite Standards will Follow.

The rules for the prevention of accidents, which were adopted by the associations on their formation, were necessarily of a very general character and will have to be supplemented from time to time by more definite regulations. Take for example the following set of rules, which were passed by the directors of the Furniture Manufacturers' Safety Association on June 8, 1915. They are certainly all-embracing, but they lack that definiteness which will ultimately make them of great force:

1. It shall be the duty of the employer to see that the premises, buildings, ways and works in or upon which any employee is required to be or go in order to carry out any part of his duties for the employer are kept in a condition as safe as possible consistently with the essential nature of the industry or employment.

2. It shall be the duty of the employer to see that all machinery, gearings and appliances in his use or control are guarded, protected or otherwise rendered safe by such means as the directors may deem necessary and practicable.

3. It shall be the duty of the employer to give, or cause to be given, all necessary instructions and directions to his employees with respect to the avoidance of danger in the employment, whether from the inherent risks of the employment or otherwise, and with respect to the operation of all machinery, gearings and appliances in connection with the employment.

4. It shall be the duty of the employee to obey and observe all reasonable instructions and directions given by the authority of the employer in respect to the avoidance of danger to himself or any fellow employee.

5. It shall be the duty of the employer to discipline or discharge any employee who disregards such instructions or directions, or who wilfully disregards his own safety or that of any fellow employee.

6. It shall be the duty of the employer to make, or cause to be made, accurate and complete reports of the facts in connection with any injury occurring in his employment, in such form and with such particulars as may be required by the directors, and shall transmit to the directors such reports in connection with such injuries as the directors may require.

Rule 2, for example, is most comprehensive, but it does not establish a definite standard of practice. That can only come after the situation has been thoroughly sized up and its needs estimated. Then one may expect to see certain regulations prescribed for the guidance of manufacturers in dealing with specific conditions. The course adopted of passing naturally from the general to the particular is undoubtedly a wise one and will produce the best results in the long run, as it will give time to work out the various problems as they arise and to the mutual satisfaction of all concerned.

United States Examples.

In establishing standards of practice, the safety associations and their experts will have an immense advantage in being able to draw on the experience of the United States manufacturers. In the United States the safety idea has made great strides in recent years and there are many factories across the line which, in safety appliances and safety methods, will serve as excellent models. By visits to these plants and by a careful study of developments among them, it will be possible for those interested in the work of the Ontario Safety associations to prepare recommendations which should have the hearty support of the memberships.

A lead in this direction is being taken by the pulp and paper makers, who, with the sanction of the Workmen's Compensation Board, are about to employ a first-class safety engineer, whose work it will be to organize the Ontario pulp and paper mills on a safety basis. These manufacturers are very much in earnest and want to do the thing properly. They are taking no half measures but are going about it with enthusiasm and determination. The result of their experiment, for experiment it is, will be watched with interest by the other safety associations.

Safeguarding Machinery.

There are various directions in which the safety propaganda must be pushed in Ontario and in Canada also. There is first and foremost the guarding of dangerous machinery by adequate mechanical safeguards. When the thought of safety-first is suggested, it is usual to think of the unprotected machine and the hazards incurred thereby. But, even with the most completely protected machinery, the workman is still liable to get into trouble and it is shown that only from one-third to one-half of the compensation cases are attributable to lack of safeguarding machines.

A still more serious source of trouble is from infection. Scratches, or other seemingly insignificant wounds, often develop into dangerous cases through lack of precautions. It must become one of the standards of the safety associations to compel the installation in every factory of first aid appliances and the organization of employees to take care promptly of even the smallest and most trivial accident. By reducing the number of cases of infection, alone, there will result a great saving in the cost of compensation.

There must be further a well organized effort to have employees co-operate heartily in the safety movement. In the model plants in the United States great pains are taken to impress constantly on the minds of workmen the need of carefulness, sobriety and all the other good qualities, the possession of which tends to reduce accidents to a minimum. By lectures, by bulletins, by object lessons and in many other ways, this purpose is sought. The employees are organized for safety and they appreciate the advantage of the movement.

Apathy in Canada.

There is still a good deal of apathy in Canada about the safety propaganda. Many employers seem to see little need for it. However, it is to be hoped that when the safety associations begin to adopt definite regulations; when possibly a merit-rating system is devised which will give the manufacturer whose plant is adequately organized for safety a preferential insurance rate, then some of these men may begin to change their viewpoint and come to realize the value of joining what is called the industrial uplift movement.

The basic organization in Ontario is good. The safety association idea, bringing all the manufacturers in each group together for common action, is a splendid conception and should make the solution of the problem much simpler than if left to the individual manufacturer. Further than that there is the federation of safety associations, formed at the last annual meeting of the Canadian Manufacturers' Association, which provides a clearing-house of ideas and ensures economy of administration and harmony of action.

A List of Safety Associations.

The safety associations now in existence, with their presidents and vice-presidents, are as follows:—

ASSOCIATIONS AFFILIATED WITH THE FEDERATION.

The Bottlers Accident Prevention Association—President, W. T. Kernahan, The O'Keefe Brewery Co. of Toronto, Ltd., Toronto; Vice-President, John Hargraft, Gooderham & Worts Ltd., Toronto.

The Clay Products Safety Association—President, J. S. McCannell, Milton Pressed Brick Co., Milton, Ont.; Vice-President, Thos. Kennedy, Dominion Sewer Pipe Co., Ltd., Swansea.

The Furniture Manufacturers Safety Association—President, George McLagan, The Geo. McLagan Furniture Co., Ltd., Stratford; Vice-President, Alex. Saunders, The Goderich Organ Co., Ltd., Goderich.

The Glass Manufacturers Safety Association—President, William Cowan, Luxfer Prism Co., Ltd., Toronto; Vice-President, Ralph King, Dominion Glass Co., Ltd., Toronto.

The Implement and Vehicle Manufacturers Safety Association—President, Thomas Findley, The Massey-Harris Co., Ltd., Toronto; Vice-President, H. Cockshutt, Cockshutt Plow Co., Ltd., Brantford.

The Jewellers and Silversmiths Safety Association—President, Thomas Roden, Roden Bros., Ltd., Toronto; Vice-President, J. W. Millard, Meriden Britannia Co., Ltd., Hamilton, Ont.

Lumbermen's Safety Association—Secretary, Frank Hawkins, 19 Castle Building, Ottawa.

The Metal Trades Safety Association—President, F. M. Tobin, Canadian Stove Manufacturers Association, Woodstock, Ont.; Vice-Presidents, Henry Bertram, The John Bertram & Sons Co., Dundas, Ont., and J. O. Thorn, The Metallic Roofing Co., Ltd., Toronto.

Ontario Pulp and Paper Makers Safety Association—President, W. P. Gundy, W. J. Gage & Co., Ltd., Toronto; Vice-President, I. H. Weldon, Interlake Tissue Mills, Telephone Building, Toronto.

The Paint Manufacturers Safety Association—President, F. W. Meek, The Jas. Langmuir Co., Ltd., Oakville, Ont.; Vice-President, J. W. Corcoran, Canada Printing Ink Co., Toronto.

The Pork Packers Accident Prevention Association—President, Albert Matthews, Matthews-Blackwell Ltd., Toronto; Vice-President, A. F. Park, The Wm. Davies Co., Ltd., Toronto.



W. C. PHILLIPS

Frontenac Moulding Co., Limited, Kingston

Chairman of the Federation of Safety Associations

The Printing Trades Accident Prevention Association—President, A. W. Thomas, The Copp Clark Co., Ltd., Toronto; Vice-President, Samuel Harris, Harris Lithographing Co., Toronto.

The Tanners Safety Association—President, C. G. Marlatt, The Marlatt & Armstrong Co., Ltd., Oakville; Vice-President, F. G. Clarke, Clarke & Clarke Ltd., Toronto.

The Textile Manufacturers Safety Association—President, C. B. Robinson, Pennmans Limited, Paris; Vice-President, A. E. Adams, Canadian Cottons Ltd., Hamilton Ont.

The Wearing Apparel Manufacturers Safety Association—President, J. B. McCarter, Eclipse Whitewear Co., Ltd., Toronto; Vice-President, Geo. H. Douglas, Thornton & Douglas Ltd., Hamilton, Ont.

The Woodworkers Accident Prevention Association—President, W. C. Laidlaw, The Laidlaw Lumber Co., Toronto; Vice-President, H. S. Cane, The Wm. Cane & Sons Co., Ltd., Newmarket.

ASSOCIATIONS NOT AFFILIATED WITH THE FEDERATION.

The Leather Manufacturers Safety Association—President, A. Brandon, The Brandon Show Co., Ltd., Brantford; Vice-President, A. E. King, Dunlop Tire & Rubber Goods Co., Ltd., Toronto.

The Electrical Employers Association of Ontario—President Col. D. R. Street, Ottawa Electric Co., Ottawa; Vice-President, D. H. McDougall, Toronto Electric Light Co., Toronto.

It is reported that 721 employees of the Nova Scotia Steel & Coal Co. have volunteered for military service. This number is equivalent to about forty per cent. of those in the employ of the company who are of military age.

FITTING MEN TO THEIR JOBS

Copy of a Letter Addressed to the Workmen of a Large United States Factory by the
Superintendent of Factory Inspection

By L. A. PHELPS

WE wonder if you thoroughly understand the purpose of the Avery Company's dispensary and safety work. Some of you do—we are afraid some of you do not. We are going to try to tell you briefly of some of the things that we are trying to do.

When we understand each other thoroughly there is no reason why we should disagree.

"If I knew you and you knew me,
'Tis seldom we would disagree.
But never having yet clasped hands,
Both often fail to understand
That each intends to do what's right,
And treat each other 'nonor bright.'
How little to complain there'd be
If I knew you, and you knew me."

The most valuable possession that any man can have is health. A healthy mind in a healthy body gives him strength and courage to face anything. He may be struck with misfortune or hard knocks but, like a cork, pushed under again and again, he will always bob up smiling. He faces the sun always, looks for the bright side, stands on the bright side and whatever shadows may fall, fall behind him. His feeling of strength and general well-being makes him capable of facing ordinary attacks with confidence in his own power to stand.

A healthy man with a job he fits and congenial surroundings is the aim and work of the Avery Company's Insurance and Maintenance Department. We strive to so fit the man to the job that his work will be just suitable, that he will be able to show his skill, that his work will not tax his endurance and that his health will not be impaired. We strive to put the strong where the work requires a strong man, we strive to put the weaker man in a job that will not further weaken him or cause him to injure himself or to cause injury to his fellows. We strive to put the skilled man in a job that requires skill and the unskilled man in a job that does not.

We Strive to Play Safe.

We don't want, and you don't want, an incompetent man or a sick man in charge of a travelling crane where your safety depends so much upon the man over your head.

We don't want, and you don't want, an unskilled man to weld the chain that carries that load over your head.

We don't want, and you don't want, an unskilled engineer in charge of the boilers in the room under or next to you.

We don't want, and you don't want yourself placed in a job where you will not be safe. If you have a weak heart, you don't want a job where you will have heavy lifting to do, you don't want to work where there is danger of falling and you don't want a man with a weak heart or a system full of booze carrying a bull ladle full of molten iron with you.

You don't want an epileptic for a partner, swinging the sledge for you, or you don't want him carrying the other end of the bull ladle shank and you don't want him on the other side of the heavy load ready to drop it suddenly and without warning, throwing it all on you.

You certainly do not and neither do we.

If your lungs are affected, you don't want to breathe irritating dust or noxious fumes and we don't want you to.

If you have a high blood pressure, you don't want to be a member of the fire department and run the risk of a stroke of apoplexy. We don't want you there either.

You want a safe job, you want a safe man to work with, and we want you to have them.

If you have something wrong with your body, something that can be cured before it gets you down and out, you want to know it and to correct it. We want you to know it and want to help you to correct it. You want to be happy and well and we want you so.

This, briefly, is the purpose of the physical examination and medical supervision in conjunction with the Avery Company employment branch. "The Avery Company cannot profit by its system of accident prevention and medical aid until its men have benefited and profited thereby." This is the whole thing in a nutshell. Your interests and the interests of the Avery Company are identical.

The Avery Company benefits by having safe men, by having men who are fitted to their work. The men profit by the same conditions. Safe men means fewer injuries. Fewer injuries mean less loss to the company in hospital bills and compensation and it means steadier workmen, greater output and increased profit. Fewer injuries mean less lost time to you. It means full wages instead of half wages. It means health instead of sickness. It means happiness to you and your family instead of sorrow.

You cannot find one instance where an injury will not cost you a thousand times what it costs the Avery Company. The loss of your eye cannot be measured to you; to the Avery Company it may mean the loss of dollars, they may feel much sympathy for you but it means a million times more to you than it does to them. It means untold suffering, despair and loss as long as you live.

Yes, the Avery Company profits by its safety work, but nothing compared to what you profit and benefit by it. That is why we want you to wear goggles if you are in danger of being struck in the eye by flying scale, sand, dust or chips. That is why we don't want you to have some fellow-workman pick the dirt out of your eye. You may get by with it a thousand times but you may lose your eye the first time. That is why we want you to bring your little slivers, scratches, cuts and bruises to the dispensary for treatment. It is hard enough to avoid ulcers in the eye and blood poisoning from scratches where treated by careful men and clean, sterile hands and instruments, without running the risk that you run when you let your helper dig at your eye with a knife or toothpick heeld in dirty hands or pick a sliver out of your finger with the same knife that he has cleaned his toe nails with.

Why Do You Take a Chance?

Why don't you turn down or bend over that nail that is waiting for some poor fellow to step on it?

Why do you throw a board down with the business end of a nail sticking up ready to drive dirt and lockjaw into the middle of your partner's foot?

Why do you use a chisel with a mushroomed head? If you would form the habit of just touching up the head of the chisel every time you grind the edge, you would never have a mushroomed head on a chisel nor would you have a doctor

probing around—in your arm or leg trying to locate the piece of steel that flew from that mushroomed head.

Why don't you block up that truck or that engine in such a way that it will stay up, instead of blocking it up in such a way that if someone leans against it or bumps into it, it will fall down on your toes or on your body?

Why do you use a chain that is too light for the load you are trying to lift? It will probably break and smash your toe or if you get it up into the air it may break and crack some poor devil's skull.

Why do you work with a loose sleeve or a flowing necktie? It will probably get wound up on the drill or shaft and bruise you up; maybe it will break your arm and lay you up for a while together. "Safety First" is just plain everyday common

When Drills Go Wrong.

Why do you try to hold that job with your hands while you drill the hole? The drill will probably hog in, the piece will fly around and knock the skin off your fingers and then you will have a nice bunch of bandages to carry around—you can tell everyone how it happened and let him laugh at you. The drill may break and let the piece you are drilling fly and hit you in the belly.

Why do you leave that revolving set-screw flying around day after day? You are the only one who goes near it. When anyone gets caught, it will be you and when you do get caught, you'll make quite a mess.

Play safe, old man, and go home to-night and every night all together. "Safety First" is just plain everyday common sense. We could write a book on the 57 varieties of ways to get hurt, all sour pickles, no sweet ones.

Now then! as for you who use common sense and play safe, we are for you—strong—as for you who cannot or will not use common sense, we will have to try to keep you from hurting yourself. You are furnished goggles free, you should be glad to wear them if in dust or in danger from flying pieces of material or sparks. We hope you will protect yourself, if not we will have to compel you to. If you cannot keep your chisels, sets, drift pins and handled tools free from mushroomed heads, we will have to take them away from you. If your wrench jaws are sprung so that they slip, we will have to have them dressed for you unless you do so yourself. If tools are taken away from you and tagged "Unsafe" because of your own negligence, it will be to keep you from hurting yourself. If you don't keep your tools up and are deprived of the use of them your work will suffer. That gets you "in bad" with the boss. Don't do it. We want to help you but we don't want you to get hurt.

Personal Experience.

The writer feels that he is qualified to speak. Several years ago he "pulled a bone head," smashed up four fingers, suffered for weeks, lost a big piece of joint and bone out of one of the fingers and has three crippled, stiff, and nearly useless fingers to carry around for the rest of his life. Experience is a great teacher. Be satisfied with the other fellow's experience and don't try it for yourself.

The things we have been telling you are not theories nor sentiment, but cold facts learned by the writer in his experience while working at his trade in more than a dozen different shops. We have tried to tell you something of the work of the Avery Company's Department of Insurance and Maintenance. We are trying to insure and maintain, safe men, safe shops, happy men, whole men.

[The factory referred to in the foregoing is that of the Avery Co., Peoria, Ill., and the letter is reproduced from *Safety Engineering*.—Editor.]

A MARKET FOR SAWS.

As practically no saws are manufactured in Russia, the latter is obliged to import all required and the article being one in large demand, there is a favorable opportunity for enterprising manufacturers to place their goods on the market.

Up to the war Russia received her supplies of saws approximately as follows:—

- 40 per cent. from Germany.
- 25 per cent. from France.
- 20 per cent. from England.
- 10 per cent. from United States.
- 5 per cent. from other countries.

Germany had the preference owing to her granting longer credits, cheaper prices and to her showing greater readiness to manufacture saws suitable for Russian needs and requirements. Furthermore, Germany and France have worked more directly, i.e., manufacturers have sent out representatives to the large towns, thereby selling direct to wholesale dealers who are principally located in Moscow. England has preferred to sell by correspondence or through English export agents. The United States manufacturers have up till now sold almost exclusively through Hamburg import merchants.

It will thus be seen that good business could be done by enterprising Canadian saw manufacturers through sending out a travelling representative to Moscow, Petrograd, Kieff, and Odessa to push this article in conjunction with other hardware. The question of speaking Russian would present no difficulty, although it would be preferable for the representative to have a knowledge of German.

It would be necessary to give credit say up to six or nine months.

The saws mostly in demand in Russia are as follows: Circular and band saws (ribbon-saws), machine driven for sawing wood, with prices about rbs. 9.10 for circular saw 20-inch diameter, and rbs. 0.17 ceps per foot for band-saws 1-inch broad.

Circular and band saws for sawing metals are also required. Prices are as follows: Rbs. 14.80 for 20-inch diameter 3m/m thick, and rbs. 0.48 per foot for bandsaws 40m/m. broad and 9 m/m thick.

A market is also present for curved saws (4 feet long, rbs. 1.40), and hand saws, ordinary (10-inch broad, 5¼ feet long, rbs. 4.35 for best quality, rbs. 4 for quality 1).—Trade and Commerce Bulletin.

MANAGER AND ASSISTANT.

There are two principal ways for a manager and his assistant to work together. One kind of a manager works very hard himself and does not leave much of importance for his assistant to do. The other kind lets his assistant do all he can while he reserves his own time and thought chiefly for things the assistant cannot do—at least, cannot do so well. He puts responsibility on his assistant just as fast as the assistant shows his ability to take it.

The first manager retards his own growth and that of his assistant. He is always overworked and has little or no time to think of new things. He is often doing work that should have been done several days before. His assistant either chafes under the restraint, or concludes that he is incompetent, and settles into a dull mediocrity.

The second manager has time and opportunity to grow, and gives his assistant room to grow. The assistant feels his own strength, and loves his work. He shoulders the responsibility with eagerness, and the work goes merrily on.

Which is best?—Waldo P. Warren, in *The Dodge Idea*.

TRANSPORTATION

By J. E. WALSH

AN IMPORTANT RULING.

THE Dominion Board of Railway Commissioners, by a recent decision, has ruled that cartage equalizations and substitutions of cartage for interswitching are both practices that are permitted, so long as the railways comply with their obligations under the Railway Act, to observe equality in the treatment of shippers. This is of special interest to manufacturers who are not in a position to take advantage of the service authorized by what is known as the General Inter-switching Order, or who have not sidings of their own.

The judgment delivered by the Assistant Chief Commissioner, Mr. D'Arcy Scott, for the Board, is as follows:

"In reconsidering the General Inter-switching Order the Board has deemed it proper to consider the questions of cartage equalizations, so-called, and the substitution of cartage for an inter-switching service. And, at the sittings of the Board at Ottawa, December 14th last, we had the benefit of a full discussion on the questions with the representatives of the different railway companies interested. The discussion largely centred around the propriety of provisions in tariffs of the C.N.R. and the O. & N.Y. Extracts from these tariffs are as follows:—

"Canadian Northern Railway Tariff C.R.C. No. E. 708, issued November 20th, 1915, effective December 27th, 1915, Section C., exception to Rule 1.

"In lieu of the absorption of switching charges authorized above, the Canadian Northern Railway (Lines Westport, Ontario and East thereof) reserves the right to effect collection or delivery of all competitive carload freight traffic from or to industries located on sidings of connecting or competing railways within the terminals of the cities named below, through its cartage agents at its own expense, the said cartage absorption by the Canadian Northern Railway (Lines Westport, Ontario, and East thereof) not to exceed:

At Hull, Que.	3c. per 100 lbs.
At Montreal, Que.	4c. " " "
At Toronto, Ont.	3¼c. " " "
At Ottawa, Ont.	3c. " " "

"Ottawa & New York Railway Company, Tariff C.R.C., No. 1030, issued September 1st, 1914, effective October 5th, 1914. Under the heading, Switching Absorption at Ottawa, Ontario.

"The Ottawa & New York Railway Company reserves the right to effect collection or delivery of all competitive carload freight traffic from or to industries located on or adjacent to, sidings of connecting or competing railway companies within the City of Ottawa, Ontario (including Hull, Que.), either by absorbing the inter-switching charges of the Canadian Pacific Railway, Grand Trunk Railway, or Canadian Northern Railway (including the switching charges of an intermediate carrier, if the services of such a road are required) as published in inter-switching tariffs on file with the Interstate Commerce Commission and Canadian Railway Commission, or by effecting such collection or delivery through its cartage agent."

"If Railway Company 'A' has a siding into a certain industry, there is no objection to Railway Company 'B' trying to equalize the advantage that Company 'A' has with that indus-

try by giving free cartage to or from the industry and its terminals. But, while Company 'B' is under no obligation whatever to respect the advantage Company 'A' has on account of its siding, it is obliged under the Railway Act to refrain from giving one shipper an undue or unreasonable preference over another, under substantially similar circumstances and conditions. These are traffic circumstances and conditions. The fact that one industry has a siding of another railway, and a second industry manufacturing the same class of goods and shipping to the same markets as the first had not such a siding, would not be a justification for refusing free cartage to the second if it was given to the first industry. A railway company is at liberty to collect a toll for cartage service or to give a free service, but it must treat all shippers of the same class of goods in the same locality alike. A tariff may say that the company 'reserve the right' to absorb inter-switching charges, or to collect or deliver freight free; but, in doing one or the other it must not give an undue preference to one industry over another. The tariff, however, must be definite and clear so that any shipper who examines it may learn exactly what toll he must pay for the railway service he desires.

"Cartage allowance to a shipper or consignee must not be made because they pertain too much of the nature of a rebate. A cartage service is rendered by those in the carting business with the expectation of making a profit. A cartage allowance to a shipper, or consignee, may be profitable to them and therefore be in effect a rebate which is unlawful. If a railway company desires to give a free cartage service, it must state in its tariff what commodities it will cart free, what rates it will pay its cartage agent, and also give the name of its agent.

"Although an inter-switching track connecting the tracks of Company 'A' with the tracks of Company 'B' may exist within four miles of an industry served by a siding of Company 'A', Company 'B' is not bound to have traffic between its line and the industry inter-switched by Company 'A', but is free to cart the freight to or from the industry if it wishes. The General Inter-switching Order is not a mandatory order requiring inter-switching wherever possible, but merely a regulative order fixing the tolls to be charged when an inter-switching service is performed.

"Cartage equalizations and the substitution of cartage for inter-switching are therefore both practices that are permitted so long as a railway company complies with its obligations under the Railway Act to observe equality in its treatment of shippers.

"There are a number of tariffs of different railway companies relating to cartage on our files which are not in accordance with the principles I have stated, which should be followed. Such tariffs must be withdrawn. New ones in proper form may of course be filed."

CHANGE IN TARIFF ON EGGS.

As a good many members of the Association are interested in the packing industry, the following particulars regarding changes in express rates on eggs packed in crates, which are proposed to take effect at an early date, should be carefully noted. Manufacturers of crates will incidentally find the specifications contained in the new tariff of value.

Scale "M."**Special Tariff for Market Eggs.**

Market eggs in cases of 30, 36 or 49 dozens, not including duck eggs, will be charged for at the table of rates given below.

Shipments of duck eggs will be charged for at actual weight.

Cases of different capacities than those mentioned below will be charged Scale "N" rates at actual weights. Cases of the capacities specified herein will be charged for at their full capacity. Shippers must mark cases, other than 30 dozen, to denote the number of dozens contained therein. Waybills and receipts given to shippers must show capacities of the cases.

Unless otherwise provided, market eggs must be shipped in wooden cases or crates filled with partitions (called "fillers") and dividing boards or floors (generally called "flats"), forming a compartment for each egg.

Shipments of eggs will not be received if contained in orange, lemon, shoe or other miscellaneous boxes, or in barrels or kegs, unless packed in sawdust, cut straw or other similar material, and in such a manner as to prevent shifting. Such packages must be plainly marked "EGGS" on the same side on which the address appears.

Cases or crates of any kind which are in bad order, or too frail to stand transportation, will not be accepted. Egg carriers having loose tops must be refused unless securely roped. All carriers must be of sufficient height to permit the placing of material forming a cushion at the bottom of the case and between the top tray and the cover.

All fillers and dividing boards must be of hard calendar strawboard weighing not less than 3 lbs., or of pulp wood milled fillers not less than 2¾ lbs. to the set, and of sufficient size to fill the compartments so as to prevent shifting. The bottom dividing board must be placed next to the eggs and on top of a cushion of excelsior, cork shavings, straw or corrugated cushion to protect the contents and keep them firmly in place.

Damaged fillers must not be used.

Standard cases for 30 dozen eggs must be made of good lumber of not less than the following thicknesses:—

Top, sides and bottom, ¾ inch.

Ends, and centre partitions, ¾ inch.

Cleats on ends of case, 9-16 inch.

Ends and cover, ¾ inch.

Larger cases must be of correspondingly heavier material.

Gift cases (cases which are not intended to be returned), must be made of suitable wood of not less than the following thicknesses:—

Top, sides and bottom, 3-16 inch.

Ends, and centre partition, 7-16 inch.

End cleats, 1½ x 7-16 inches.

Second-hand gift cases or carriers (cases or carriers which have already been used in the transportation of eggs and which are re-used), must be strapped with iron or wire on the sides and bottom at each end, or must be securely roped.

Billing Weight for Standard Cases.

Cases containing 30 dozen 55 lbs. each.

Cases containing 36 dozen 66 " "

Cases containing 49 dozen 90 " "

Table of rates per case as per classification page 26, minimum 25 cents per shipment unless graduate charge or rate per 100 lbs. is less. When carried by more than one company, minimum of 25 cents for each company. See Condition of Carriage No. 8.

When other articles under Scale "N" are shipped in cases in which eggs are also contained, the weights may be combined and the billing weights given above applied.

When cases of eggs are received at shipping point in apparent good order and a clear receipt is given by the express company, and they arrive at destination in the same apparent good order and show no external evidence or damage, no inspection of the contents will be permitted before delivery thereof to the consignee and the consignee must accept and give a clear receipt for same.

Where cases show external evidence of damage or shortage, consignee shall have the privilege of inspecting the contents of such damaged cases, such inspection to be made jointly with carriers' representative and receipt taken in accordance with the actual ascertained condition of the property.

HARNESSING THE TIDES.

The proposal to harness the tides of the Bay of Fundy at Cape Split, N.S., by means of a current motor which would pump the water into huge reservoirs on the cliffs above, the descending water furnishing the power, has been followed by a suggestion to utilize the Reversing Falls at St. John in a like manner. The suggestion has come from F. S. Small, acting resident engineer of the Public Works Department, who says that a stronger current is obtainable at the Falls than at Cape Split, and that there would be a longer period between tides for a motor pump to operate. For centuries in winter as in summer, these Falls have done nothing but frolic along, galloping down stream when the harbor tide was low and reversing their run when the tide had reached its highest point. All attempts to utilize their tremendous energy have come to naught, but by the application of a current motor such as has been suggested at Cape Split, and by the erection of reservoirs on the heights above, it is thought that at last a way has been found by which they may be persuaded to do some real work.

THE LUMBER INDUSTRY IN NEW BRUNSWICK.

The lumber cut in New Brunswick will be much larger this winter than was anticipated at the opening of the season. On the New Brunswick Railway Company's lands the scalers' returns are said to show a cut of about 65,000,000 feet, which is fully equal to last year's figures. Although there were about 50,000,000 feet of manufactured lumber awaiting shipment on the Miramichi, almost all the operating concerns along the river are cutting more than they originally intended to take out. Frasers Limited, of Fredericton, will have enough lumber to keep their mills going throughout the entire season. In the district about Fredericton the cut on the Crown lands is equally as large as last year, and this is said to be generally true of the operations on the St. John River. On the Upper St. John, *The Bangor Commercial* says the total cut is 53,500,000 feet, a million of which will be cedar. About 19,500,000 of this will be cut in the Stetson mill at St. John. It is generally recognized among the lumbermen that the slump in lumber is over and that improved conditions may be looked for next summer.

At the annual convention of the salesmen and department heads of the Canadian Fairbanks-Morse Co. held last month in Montreal, President H. J. Fuller stated that 53 members of the sales department were now with the Canadian overseas forces.

I N S U R A N C E

Canada's Fire Loss.

ACCORDING to estimates compiled by the *Monetary Times*, the fire loss throughout Canada during the month of January amounted to \$1,649,217 compared with December loss of \$1,595,255 and \$1,249,886 for January of last year. The estimates of February fire losses are not yet complete, but they promise to be unusually high, even without including the sum involved in the Parliament Buildings catastrophe.

Life Insurance Merger Off.

Announcement has been made at Ottawa that the Superintendent of Insurance has made a report to the Minister of Finance, adverse to the proposed re-insurance of the Manufacturers' Life by the Sun Life of Canada, as not being in the interests of the policy-holders of the Manufacturers' Life. The Minister of Finance has notified the two companies as to the nature of the report and the proposed merger will therefore not take place.

Toronto's Outlay for Insurance of Soldiers.

The amount paid by the City of Toronto for the insurance of its soldiers up to December 31, 1915, according to the City Treasurer, was \$554,336.72, as follows:

Metropolitan Life Insurance Company	....\$464,636.53
Ætna Life Insurance Company	..... 46,097.74
State Life Insurance Company	..... 38,506.32
Miscellaneous	..... 3,096.13
Death claims paid direct by city	..... 2,000.00
	\$554,336.72

State Life Insurance.

A bill has been introduced into the South Carolina Legislature, providing for a system of state life insurance somewhat similar to a plan once tried in Wisconsin, which resulted in failure. Under the South Carolina bill, however, no provision is made for a fund at the expense of the State, the only resources being the premium income. The agents are to be county officials who are to receive a fee for each application they forward to the commission in charge of the fund. The rates are to be based upon the American Experience Table of Mortality with additions for extra hazard, and with interest at three per cent. A complicated system of credit is authorized to take care of all expenses and contingencies, on a basis charge of two dollars for each \$1,000 of insurance. When will state legislators learn that insurance is a business requiring a vast amount of experience for its successful handling?

Insurance Fraud Exposed.

A particularly impertinent insurance fraud has recently been exposed in the United States. A gentleman by the name of William Myers has for some time past made a business of selling policies of the "German Fire Insurance Company of Berlin, Germany," an entirely fictitious institution. Victims were found both in Michigan and Ohio, and the most remark-

able thing about the affair is that Myers was able to find anyone to purchase his wares. The policies were printed on a standard form with a list of directors copied from the policy of a well-known New York company. Attached to the policy was a printed "wording" which was prefaced by the following literary gem:—

"German Fire Insurance Company does agree with the said party and name herein assigned that they will grant five gallons of gasoline not exceeding and lightning, cyclone or flood, or electricity for lighting, or water. Full damage if legal according to the said investigation will show."

Explosion Hazard in Refrigerating Plants.

Correspondence between the New York Board of Fire Underwriters and the chief engineer of the Quincy Market, Cold Storage and Warehouse Company, Boston, contains interesting facts regarding the explosion hazard of refrigerating plants. The latter company have carried out experiments in which they reproduced, as nearly as possible, the supposed conditions which had caused explosions in other plants. The investigations established that ammonia, as such, is neither inflammable nor explosive in air. There is, however, under certain conditions of operation, a slight decomposition of ammonia into its component elements, these being one atom of nitrogen and three atoms of hydrogen. The nitrogen is inert but, if the hydrogen has an opportunity to accumulate and segregate, it is very inflammable and highly explosive when mixed with a favorable proportion of air and subjected to a sufficiently high temperature. The liberation of hydrogen is accelerated when zinc is in contact with ammonia at high temperatures.

The investigators came to the conclusion, however, that the possibility of an explosion from this cause was decidedly remote and could only occur under severely abnormal conditions of operation which would provide the hydrogen, the proper mixture of air or oxygen and the temperature for the explosion.

Too Many Don'ts.

In the educational campaigns to reduce the economic waste caused by fires and accidents, large quantities of literature are daily being placed in the hands of the public. Much of the matter so distributed is of great value and undoubtedly works much good for these causes. However, there is a great deal of time and money wasted in the preparation and distribution of literature and instructions which are utterly useless. Not the least of this matter is in the constant issuance of so-called "Don'ts." The aims and purposes of the propagandists of this literature are indeed the highest, but the method of treating their subjects really defeats the object. The public is so cautioned about what not to do that it just sits still and does nothing.

It is a well-known fact that in social law and order there is more mischief done by the man who does nothing than the one who is encouraged to do things. By keeping busy, persons do not have time to violate laws. Another psychological truth, from childhood up, is that more can be accomplished by telling a person what to do than by giving negative advice. The very fact that a human being is commanded not to do a thing often stimulates a desire to do the thing prohibited.

Without offence to the workers who have given so much time and labor to the subjects of accident and fire prevention, it is earnestly to be hoped that this criticism will be taken seriously and in good faith to the end that the future propaganda will contain a little more of what to do and a little less of the "Don't" for the general good of the movement. Instead of telling a man not to throw a lighted cigar on the floor of a room, tell him what receptacle to provide and to deposit the butt there. The same principle may be applied to all literature of an educational nature without in any way impairing its terseness, and will certainly add much to its force.

Penalize Large Losses.

An important ruling has just been issued by the State Fire Insurance Commission, which has the effect of equalizing fire records in Texas. The ruling imposes a charge against cities in Texas having a bad fire record for three consecutive years. It is pointed out by the Commission that a discrimination exists under the present system, a credit being allowed in insurance rates of cities and towns having a continuous good fire record for three consecutive years, but no charge is made for a bad fire record. Under this ruling a charge of three per cent. will be imposed for each five per cent. or fraction thereof in excess of seventy-five per cent. loss ratio for the three calendar years next preceding, and the maximum charge is fixed at fifteen per cent. The Commission believes this will serve more equally and equitably distribute fire losses in Texas.

WORKMEN'S COMPENSATION BILL.

A new Workmen's Compensation Bill was introduced in the Manitoba Legislature on February 10, sponsored by J. W. Wilton, M.P.P. The measure, as explained by Mr. Wilton, was drawn up by a committee of ten members of the house, all of whom represented ridings in which there were large numbers of working men. It is really a government measure, though it has been introduced by a private member.

The principal difference between the proposed Manitoba Act and the Ontario Act is that in the case of the former, an employer may have an approved insurance company carry his liability for him. Other than this, except for a proviso of one hundred dollars for medical attendance, nursing, etc., which is not included in the Ontario Act, the two measures are fairly identical. The scale of compensation is the same and the method of administration by a commission is the same.

Speaking on the bill on February 11, R. A. Rigg, representing the labor interests, said the measure would be accepted by the labor party as a temporary arrangement, not as a permanent solution of the problem. He pronounced it to be superior to the Ontario Act in its provision for immediate aid to injured workmen, but inferior in that it contained no provision for men suffering from occupational diseases. He thought the rates of compensation should be higher in Manitoba because of the higher cost of living.

On February 12, Mr. Wilton conceded the contention of the labor party that occupational diseases should be included. He explained that they had not been placed in the draft bill because it had not been thought necessary to do so, as they did not prevail in the province so far as the committee could gather. The second reading of the bill followed.

The bill was later taken up by the law amendments committee who gave several hearings to representatives of capital and labor. W. R. Ingram, chairman of the Western branch of the Canadian Manufacturers' Association was heard on

February 23, as was also D. Campbell representing the railway workers' organizations; T. J. Murray, representing the Trades and Labor Council, and J. C. Waugh, representing the insurance agents.

OBITUARIES DURING FEBRUARY.

The death occurred in Halifax, N.S., on February 28, of Wiley Smith, president of the Acadia Sugar Refining Co. Mr. Smith was in his eighty-third year, and up to within a fortnight of his death was in perfect health. He contracted la grippe, which produced complications necessitating an operation, from which he did not recover. He was a native of Halifax, and in 1860 established the wholesale grocery business of A. & W. Smith in partnership with his brother. Later on he became interested in the Mayflower Tobacco Co., the Victoria Coal Mining Co. and the Acadia Sugar Refining Co. He was one of best known men in Halifax.

James H. McKechnie, president of the Canadian Consolidated Rubber Company, died last month at his home in Montreal after a short illness. The late head of the Rubber Company was born at Granby, Que., in 1849, and educated in the public schools of the province. Mr. McKechnie spent half his lifetime in the rubber business being associated for many years with the late S. H. C. Miner in building up the Granby Rubber Company. About a year ago he was made president of the Canadian Consolidated Rubber Company.

S. A. McGaw, late general manager of the Western Canada Flour Mills Co., Limited, died as a result of an automobile accident at Los Angeles, Cal., on February 9. Only the week before he had retired from active association with the milling industry, and had left for California on a holiday trip. He was born in Ireland, and came to Canada as a boy. In 1876 he became assistant manager of the A. W. Ogilvie Flour Mills Co., and moved to Winnipeg in 1882. From 1889 to 1905 he was western manager of the Lake of the Woods Milling Company. He then founded the Lake Huron and Manitoba Milling Company of Goderich, Ont., later amalgamating with the Kelly Milling Company of Brandon, Man. In conjunction with Andrew Kelly he founded the Western Canada Flour Mills Company, of which he became general manager and vice-president, and later, president.

DOUBLE-BLADED HACK SAW.

The capacity and speed of the power-driven hack saw has been doubled by a saw which has two blades, each one attacking the work from opposite sides, thus doubling the capacity of the ordinary single-bladed machine. It is said to be possible to get 270 strokes per minute with this apparatus. The blades move up and down in unison, one cutting on the down stroke and the other on the up. The sawing is thus a continuous operation; both saws feeding into the stock and releasing on the return. The device makes use of standard hack saw blades and by reversing them it is possible to secure full service from them. The saw frames are of heavy seamless tubing and are operated in the usual manner, but a novel feature is introduced in the method of keeping the work and blades cool without the use of a pump. The lower ends of the frames have ball check valves which work up and down in the cooling solution contained in the base of the machine, thus forcing the cooling liquid through the tubing and down on the saws. This system of circulating the cooling liquid appears as efficient as it is simple.—*Scientific American*.

TARIFF

By J. R. K. BRISTOL

NEW TARIFF CHANGES.

1. Resolved, That it is expedient to amend Schedule A to the Customs Tariff, 1907, and to strike thereout tariff items 92 and 267, the several enumerations of goods respectively, and the several rates of duties of Customs, if any, set opposite each of the said items, and to provide that the following items, enumerations and rates of duties be inserted in said Schedule A;

Tariff Items.		British Preferential Tariff.	Intermediate Tariff.	General Tariff.
92	Apples, per barrel	60c	90c	90c
267	Oils, petroleum, (not including crude petroleum imported to be refined or illuminating or lubricating oils) .8235 specific gravity or heavier at 60 degrees temperature, per gallon..	1/3c	1/2c	1/2c
267a	Crude Petroleum in its natural state, .7900 specific gravity or heavier at 60 degrees temperature when imported by oil refiners to be refined in their own factories	5%	7 1/2%	7 1/2%

Provided, however, that the goods hereinbefore enumerated shall be exempt from the rates of duties of customs specified in Section 3 of The Customs Tariff War Revenue Act, 1915.

2. Resolved, That any enactment founded on the foregoing resolutions shall be deemed to have come into force on the 16th day of February, 1916, and to have applied to all goods mentioned in the foregoing resolutions, imported or taken out of warehouse for consumption on and after that day, and to have also applied to goods previously imported for which no entry for consumption was made before that day.

NEW CUSTOMS RULINGS.

The new customs rulings on *White Cotton Embroidery*, described as being in the form of children's unfinished dresses, is that white or cream colored cotton or linen embroidered articles of women's or children's wear, which are simply cut out, following the lines of the embroidered work (as per samples under review), and not being further manufactured or marked, may be allowed entry under the provisions of Tariff Item 526. According to Item 526 the regular tariff rates are: British Preferential, 12 1/2 per cent. ad val.; French Treaty, 17 1/2 per cent. ad val.; General Tariff, 20 per cent. ad valorem.

Passover Bread and Matzo.—The above products are ordered to be admitted free of duty when entered at any Custom House in Canada between the 1st of March and the 17th of April, 1916, inclusive, for use during the passover season.

Aigrettes, and Egret Plumes.—In Customs memorandum 1991-B dated at Ottawa the 14th day of February, 1916, the following instruction is placed before Collectors of Customs.

"Item 1212, Schedule "C," Custom Tariff—Your attention is recalled to the above tariff item classing as prohibited importation into Canada aigrettes, egret plumes or so called osprey plumes and the feathers, quills, heads, wings, tails, skins, or parts of skins of wild birds, either raw or manufactured, except as in said item provided.

"Complaints have been made by dealers that goods prohibited importation under this item have been brought into Canada on trimmed hats from the United States and sold to milliners in Canada.

"You are requested to exercise especial vigilance in this regard and report seizures on Form K-9 of any such importations."

HIDES, SKINS AND WOOL IMPORTED FROM THE UNITED STATES.

The above animal products when originating in any state other than the State of Illinois in the United States may be imported into Canada without any necessity of disinfection, according to a recent order issued by the Department of Agriculture; but the importation of the above goods from the State of Illinois is still subject to the following restriction, viz:

(7) Hides must be accompanied by a certificate of disinfection signed by an officer of the Bureau of Animal Industry. Less than car loads will not be admitted.

(8) Picked pelts of sheep and goats, also skins of wild fur bearing animals, tanned or untanned, may be admitted.

(9) Tanned sheep and goat skins with wool attached must be accompanied by certificate of disinfection signed by an officer of the Bureau of Animal Industry.

(10) Wool may be admitted under the following conditions:

(a) Pulled wool, scoured and dried at a temperature of not less than 160 degrees F. and accompanied by affidavit of shipper to that effect.

(b) Foreign wool, ex-warehouse in Illinois, in original bales, and accompanied by affidavit of warehouseman that it has not been in contact with other wools.

EXPORTS TO SWITZERLAND.

The exportation of certain goods from Canada to Switzerland is governed by an order-in-council passed on the 28th day of January, 1916, by the terms of such order-in-council the exportation to Switzerland of the articles mentioned in the following schedule is hereby prohibited, unless these articles are consigned to the Société Swiss de Surveillance Economique.

This order-in-council is to be read in conjunction with orders-in-council at present in force, or which may hereafter be passed, relating to prohibited exports.

Articles mentioned in the schedule which forms part of the order-in-council, which are at present, or may in the future be prohibited to be exported to Switzerland, cannot be exported even though consigned to the society.

Articles mentioned in the schedule which are not otherwise prohibited to be exported to Switzerland, may only be exported when consigned to the society.

No goods can be consigned to the society without the formal consent of the society's office in Berne being first obtained by the ultimate consignee in Switzerland. Proof of such consent will be required before a license will be issued for shipment to Switzerland of the commodities in question.

The only recognized evidence of such consent will be the actual certificate of acceptance issued by the society.

Such of the articles in the following lists as are not for the time being prohibited to be exported to a destination in Switzerland:—

Accumulators, electric, and accumulator plates.

Aceto cellulose.

Acetone.

Acid—

Acetic and acetates.

Hydrobromic.

Hydrochloric.

Lactic.

Nitric.

Salicylic.

Stearic.

Sulphuric.

Tartaric, cream of tartar and its alkaloids; tartrates.

Aconite and its preparations and alkaloids.

Acorns.

Aeroplanes and airships and engines and parts.

Aeroplanes, component parts with accessories and articles suitable for use in connection with aircraft.

Alcohol: Amyl fusel oil, methylic, ethylic.

Alumina: Anhydride, hydride, salts.

Alum.

Aluminium in all forms; ore: Pure metal; alloys of, oxides of.

Aluminium, manufactures of.

Ammonia.

Aniline and its combinations.

Animals, living.

Antimony in all forms; ore, alloys of, including anti-friction metal.

Antipyrine (phenazone).

Arms of all kinds and component parts.

Arsenic and its salts.

Asbestos, crude and manufactured.

Aspirin.

Atropine.

Bamboos.

Bauxite.

Beans, locust.

Beet for manufacturing sugar.

Belladonna and its preparations and alkaloids.

Belting (machine) of leather, and other.

Benzine.

Bichromate of soda.

Bicycles and component parts.

Bismuth and its salts.

Blankets (woollen).

Boats for river use (barges, etc.)

Bones.

Bran, pollard, and flour-mill waste.

Brewers' and distillers' grains used for cattle feeding.

Bromine and bromides.

Bullion (see Gold).

Butter and butter substitutes.

Cable, insulated.

Cables, cordage, ropemakers' wares, of any textile materials.

Cachou, crude.

Caffeine.

Camphor.

Candles.

Cantharides and its preparations.

Caoutchouc (see Rubber).

Carbide of calcium.

Carbon, sulphide.

Carbonate of soda.

Cattle cake.

Caseine.

Cattle (live stock).

Cattle feeding stuffs, brewery grains, and other.

Caustic soda.

Celluloid, raw, in bulk, sheets, rods, tubes, clippings, and waste.

Cellulose.

Cement.

Ceresine.

Charcoal.

Cheese.

Chemical preparations for pharmacy.

Chicory root fresh and dried.

Chloral, chloramid, and preparations containing chloral.

Chlorates and perchlorates.

Chloride of lime, tin, magnesium, zinc.

Chlorine, liquified.

Chloroform.

Chrome, ore and metal, in all forms.

Chronometers, ships'.

Cinchona bark.

Cloth, woollen.

Coal and coke.

Cobalt in all forms.

Coca and its preparations.

Cocaine and novo-cocaine.

Cocoa—chocolate.

Cocoa beans.

Codine (alkaloid of opium).

Coffee.

Coin, gold, silver, nickel, bronze and copper.

Colloidion.

Copper: Ore (including pyrites); pure metal and alloys of, in all forms.

Cork.

Cotton and cotton waste, including cotton yarn waste.

Cotton rags.

Cotton tissues, all kinds, made up or otherwise.

Creosote, wood.

Cutch, including gambier.

Cyanamide, calcium.

Cylinders and recipients of iron or steel for compressed or liquid gas.

Detonators.

Diamond drills for draw plates 15-100 mm. diameter and over (diamond weighing over 1/4 ct).

Diamonds, rough, suitable for industrial purposes.

Digitaline.

Distillers' grains, and residues from apples, raisins, olives.

Dyes, coal tar.

Earth containing infusoria.

Eggs.

Electrical fire lighters.

Electrical carbons.

Electrical insulated wire and cables.

Electrodes, piles and component parts.

Emery wheels.

Fmetine and its salts.

Engine packings (see Packings).

Ergot of rye, not including liquid or other medicinal preparations of ergot.

Ether sulphuric and ether acetic.

Fucaine, hydrochlor.

Explosives: Gunpowder and similar explosives, guncotton, nitroglycerine, fulminating cotton, dynamite, melinite, etc.

Farinaceous goods of all kinds, being foodstuffs, wheat, rye, oats, barley, maize, buckwheat, grain, meal and flour, malt, ships' bread and biscuit (excepting gluten bread)

groats, semolina, Italian paste, sago, salep, mandioca flour, mandioca, tapioca and flour rice of all kinds, dried vegetables of all kinds, and their meal, chestnuts and flour, dari, millet, and alpiste (long millet), potatoes.

Fats, vegetable, for food.

Fats, animal.

Ferro-chrome and ferro-nickel, and all other ferro alloys.

Fillings and scrap, of old copper, tin, zinc and their alloys.

Firearms of all kinds and their component parts.

Fish, fresh and preserved, dried, salted.

Fish, oil.

Flax, raw, as tow or combed.

Flaxen canvas: Hammock canvas, kitbag canvas, navy canvas, tent canvas.

Flaxen fabric suitable for balloons.

Flour: Potato, maize, and other sorts of; also gluten and fécule.

Forage: Hay, straw.

Forges, portable.

Formol.

Gambier.

Gas, asphyxiating (materials for manufacture of).

Gentian and its preparations.

Glasses, field and opera, other than "de luxe."

Glasses for optical instruments, and for spectacles.

Glycerine.

Graphite.

Gold: Bullion, ingots, bars, dust, battered articles, coin.

Grindery used in the making of boots and shoes, including rivets, plates, nails, buttons, etc.

Grindstones and emery wheels.

Gums, all kinds.

Gut, animal, in all forms, e.g., fresh, dried, salted bladders, sausage casings.

Hair, animal.

Hammock, canvas.

Hams.

Hæmatite iron.

Hemp, crushed, dressed, and combed.

Hemp, yarn, cordage and twine.

Hemp, cloth.

Henbane and its preparations.

Hides, raw and dressed.

Horn and similar materials.

Horses, asses, and mules.

Hyposulphite of soda.

Indigo, natural.

Instruments, observation, geodesy, and optical.

Instruments, nautical, of all kinds.

Iodine, iodide, iodoform.

Inecacuanha root.

Iridium.

Iron ore (including pyrites) and metal; iron castings and forgings, tinned plate, including boxes for packing food).

Jute: raw; yarn; bags.

Jute: piece-goods.

Lard.

Lava, volvic.

Lead, pure, and its alloys; pipe; sheet.

Lead ore.

Leather and leather wares.

Linen tissues.

Linen yarn.

Locust beans.

Lubricants.

Machine tools and parts thereof.

Machinery and parts thereof, suitable for use in marine and aerial navigation.

Machinery, electrical, electric dynamos, and motors.

Machinery, refrigerating.

Machinery and parts thereof, exclusively used for the manufacture of munitions and weapons of war.

Magnesium.

Magnetos.

Manganese: ore and metal, all forms.

Manures, chemical.

Maps and charts.

Margarine, oleo-margarine, copra butter, and similar products.

Meats, tinned, and extracts of.

Meats, fresh and refrigerated.

Meats, salt, and smoked.

Medicinal preparations.

Mercury, fulminate of.

Mercury: ore, metal and preparations.

Metallic peroxides.

Methyl, salicylate.

Mica, rough and worked.

Milk, condensed, sweetened or not.

Miners' fuses.

Molasses.

Molybdenum: ore and alloys.

Morphia.

Munitions.

Needles, knitting.

Nickel ore: metal, pure and alloyed, all forms.

Nuts and seeds, oleaginous.

Nitro-benzine.

Nitrates and nitrites.

Nuts and walnuts.

Nux vomica and its alkaloids and preparations.

Oil, vegetable.

Oil-cake, whole and ground.

Oil, whale.

Oil-cloth.

Oil, mineral, crude, refined, essential, heavy.

Oil, residual of distillation of alcohol.

Oleaginous nuts and seeds.

Oleine.

Onions.

Opium and preparations containing opium.

Optical instruments, glasses for.

Osmium.

Packings, engine and boiler, including slag wool.

Paraffin.

Paraldehyde.

Peat.

"Peptone Witte."

Peroxides, metallic.

Pharmaceutical preparations (vegetable alkaloids).

Phosphorus products, all kinds.

Phosphorus and phosphate of lime.

Photographic plates and papers.

Pigeons, living.

Platinum.

Pork-butchers' meat ("charcuterie").

Potassium, potash, and potash salts.

Potatoes.

Powder, and similar explosives (see Explosives).

Poultry.

Projectiles and other munitions of war.

Protargol.

Preserved foodstuffs, all kinds.

Pyramidon; pyridine (base of).

Pyrites, copper and iron.

Quinine and its salts.

Quinine, extracts of.

Rabbits.

Rags, of all kinds.

Ramie, raw; yarn; tissues; and waste.

Rattans, natural and peeled; canes.

Rhodium.

Residue of apples, grapes, olives ("marcs").

Resinous substances, pine and fir, oil of turpentine; turpentine; rosin; rosin pitch.

Ropes (see Cables).

Routhenium.

Rubber: Balata gutta-percha, raw or re-melted, including waste and ebonite; rubber ware.

Rubber, vulcanized, in sheets.

Rye, ergot of (see Ergot).

Saccharin, including saxon.

Sacks (coal), satchels and bags of all kinds (excepting paper bags).

Salicylate of soda.

Salin of beetroot.

Salol.

Salts of—

Copper, chrome, tin, mercury, thorium, ammonia, cerium, titanium, molybdenum, vanadium, and other salts of rare earths.

Salvarsan and neo-salvarsan.

Sanitary materials and fittings.
 Santonin and its preparations.
 Scraps: Metal and filings, copper, tin, zinc, and their alloys.
 Seeds, sowing.
 Selenium.
 Serum.
 Silicon.
 Silk, Tussah, raw, spun and woven.
 Silk, floss and noils, in mass or combed; yarns and tissues of the same, undyed, unprinted.
 Shipbuilding materials, rigging and apparatus.
 Soap.
 Sodium sulphide; also hyposulphite.
 Soups, compressed, desiccated.
 Steel, all kinds.
 Sugar, raw, refined, candy.
 Sugar of milk.
 Sulphate of copper and cuprous powders; green copper.
 Sulphate of soda, sulphate of zinc.
 Sulphate of alumina.
 Sulphonol.
 Sulphur and pyrites.
 Sulphur dioxide (anhydride).
 Starch.
 Steel scraps.
 Surgical bandages and dressing.
 Surgical instruments and apparatus, including drain tubes and rubber gloves.
 Swords, bayonets, and other arms not being firearms or parts thereof.
 Tapioca.
 Tar (coal) and its chemical products.
 Tarpaulins.
 Tartar.
 Tar (wood) and creosote oil.
 Tanning substances of all kinds, including extracts used in tanning.
 Telegraphs, material for.
 Terpene.
 Textile fabric for balloons.
 Theobromine.
 Thorium, salts.
 Thread, cotton.
 Thread, woollen.
 Thread, linen.
 Thymol and its preparations.
 Titanium, ore.
 Tin, ore; metal, pure and alloyed, in all forms.

Tools, with or without handles, of iron or steel; spades, chisels, picks, axes, shovels, saws, farriers' tools, carpenters', wheelwrights', and saddlers' tools, entrenching tools, billhooks, hoes, and tool handles.
 Tools used in the making of boots and shoes.
 Tomatoes, fresh and preserved.
 Trional.
 Trioxymethylene.
 Tungsten, in all forms.
 Turpentine, essence.
 Uniform clothing and military equipment, camping, saddlery, harness.
 Urea and its compounds.
 Urotropin (hexamethylene tetramine) and its preparations.
 Vanadium, ore.
 Vaccine.
 Vaseline and mineral jellies.
 Vegetables, fresh and preserved.
 Vehicles of all kinds, haulers and traction engines of all kinds, pneumatic tires, all articles (unmanufactured or manufactured) used in military or naval transport.
 Ventilators of 50 to 250 kilogrammes.
 Veronal (acid diethylbarbituric), sodium veronal.
 Vessels, sailing, steam, motor.
 Water, oxygenised.
 Wire, insulated.
 Wolfram (tungsten), ore and metal, all forms.
 Wood, walnut, unhewn, squared and sawn.
 Wood, ash, beech, birch, lime, mahogany, okoume, plane.
 Wood, for building.
 Wood, for rifle stocks and rifle parts.
 Wool of all kinds, including waste.
 Woollen tissues.
 Woollen hosiery and knitted goods.
 Yeast.
 Yarns, cotton.
 Yarns, woollen.
 Yarns, linen, hemp, jute, ramie.
 Yarns, mohair, alpaca hair.
 Zinc ore; metal, pure and alloyed, in all forms.

(c) If he is an executor or administrator, the returns shall be the same as far as practicable as the deceased person, if living, would have been liable to make.

(d) Where as agent or trustee he pays income tax, he is hereby authorized to recover the amount so paid from the person in whose behalf he paid it, or to deduct it from any money in his hands belonging to that person.

(e) He is hereby authorized and required to retain from time to time out of any money which comes to him in his representative capacity so much as is sufficient to pay the income tax which is or will become due in respect of the income.

(f) He is hereby made personally liable for the income tax payable in respect of the income if, after the commissioner has required him to make a return, or while the tax remains unpaid, he disposes of or parts with any fund or money which comes to him from or out of which income tax could legally be paid, but he shall not be otherwise personally liable for the tax.

Provided that the Commissioner may, upon application by the agent, permit disposal of such fund or money or part thereof as he considers necessary.

(g) He is hereby indemnified for all payments which he makes in pursuance of this Act or by requirements of the commissioner.

(h) For the purpose of insuring the payment of income tax, the Commissioner shall have the same remedies against attachable property of any kind vested in or under the control or management or in the possession of any agent or trustee as he would have against the property of any other taxpayer in respect of income tax, and in as full and ample a manner.

An amending Act has recently been passed, Section (4), of which is as follows:

(4) Section fifteen of the principal act is amended:

(a) by adding at the end of sub-section (2) thereof the words "to the extent of the tax payable on goods sold by him after the 30th day of June, 1915"; and

(b) by adding at the end thereof the following sub-section:

(3) Goods shall be deemed to be sold in Australia on account of a person not resident in Australia, or on account of a company not registered in Australia, if any person in Australia receives a commission in respect of the sale of the goods or is paid a salary for obtaining orders for or for influencing the sale of the goods."

It will be observed that this Income Tax Act includes provisions for the assessment of Income Tax on the profits made by non-resident merchants, manufacturers and traders in goods sold through an agent or representative resident in Australia. The profits are deemed to be five per cent. on the turnover. The tax which is to be levied varies, so far as can at present be ascertained, according to the amount of the turnover from 3 3/800d. to 1s. and 6d. in the £ sterling. It appears, however, that even in Australia there is some doubt as to the amount of the tax on firms and companies. Advices which reach us show that this tax is being strongly protested against by industrial and mercantile interests in the United Kingdom.

CREAM SEPARATORS IN INDIA.

Efforts are being made to establish regular dairies in India on European lines. These efforts have a tendency to create a market for cream separators.

A large amount of butter is produced in the Karachi con-sular district, but it is not used in its natural form, as the natives boil it to make ghi, or clarified butter, employed in-

AUSTRALIAN FEDERAL INCOME TAX ON OVERSEA FIRMS.

The following extracts are given for the information of members in relation to the above tax:

Section 15 of the Income Tax Assessment Act, 1915, provides that—

(1) In the case of a person selling goods in Australia on account of a person not resident in Australia, or on account of a company not registered in Australia, the principal shall be deemed to have derived from such sale a taxable income equal to £5 per centum upon the price at which the goods were sold.

(2) The person selling the goods shall be assessable on the taxable income as the agent for the principal and shall be personally liable for the payment of the tax.

Section 52 of the principal act provides as follows: With respect to every agent, and with respect also to every trustee, the following provisions shall apply—

(a) He shall be answerable as taxpayer for the doing of all such things as are required to be done by virtue of this act in respect of the income derived by him in his representative capacity and the payment of income tax thereon.

(b) He shall in respect of such income make the returns and be assessed thereon, but in his representative capacity only, and each return and assessment shall, except as otherwise provided by this act, be separate and distinct from any other.

stead of lard in native cookery. This tendency is emphasized by the fact that among large numbers of the people there are objections in some instances to anything made from swine, and in others to anything that has been killed.

At an industrial exhibition held in Madras recently, a prominent place was given to the exhibition of a model dairy fitted up by the Coimbatore Agricultural College, and machines for manufacture of butter were shown in operation. The vice-principal of Coimbatore College delivered a lecture in which he explained the efforts that are being made in Southern India to develop the dairy industry. There were certain limitations to successful dairying in this country, he said, and prominent among these were initial capital, technical skill, and business aptitude. In India, as butter was not a chief commodity among the Indians, he suggested that dairy farms on the new methods be started in close proximity to places inhabited by Europeans.

The question of a market for cream separators may be better understood by any Canadian manufacturer interested through communication with the Director of Agriculture, Chepauk, Madras, British India; Principal of Coimbatore Agricultural College, Coimbatore, South India; or the Director of Agriculture, Bangalore, Mysore, British India.—(*Commerce Report*, February 23, 1916.)

CURACAO INCREASES USE OF AMERICAN PERFUMES.

Conditions in the local stores of Curacao indicate that practically all except American and French perfumes have now disappeared from the market. The popularity of American perfumes seems to be steadily increasing.

In 1914, the latest year for which statistics are available the imports of perfume were \$10,000, which was \$7,000 less than in the preceding year; the imports from the United States rose, however, from \$1,699 in 1913 to \$2,260 in 1914. In 1913, the latest year from which the imports from the various countries are obtainable, they were: Germany, \$2,934; France, \$4,738; England, \$6,800; United States, \$1,699; Netherlands, \$982; Colombia, \$20; total, \$17,173.—(*Commerce Report*, February 24, 1916.)

BRITISH RESTRICTIONS ON IMPORTATIONS.

An Imperial order-in-council of February 15, 1916, provides as follows:

"As from and after the 1st day of March, 1916, subject as hereinafter provided, the importation into the United Kingdom of the following goods is hereby prohibited, viz: All materials for the manufacture of paper, including wood pulp, esparto grass, and linen and cotton rags; paper and cardboard (including strawboard, pasteboard, millboard and wood-pulp board), and manufactures of paper and cardboard; all periodical publications exceeding 16 pages in length, imported otherwise than in single copies through the post; tobacco, unmanufactured and manufactured (including cigars and cigarettes); furniture woods, hardwoods and veneers; stones and slates. Provided always, and it is hereby declared, that nothing in this proclamation shall apply to any goods of the descriptions specified which are imported under license given by or on behalf of the board of trade and subject to the provisions and conditions of such license."

Another Imperial order-in-council of the same date prohibits any British steamship (other than vessels engaged in the coasting trade) from proceeding on any voyage unless a license to do so has been granted in favor of the charterer by the Licensing Committee of the Board of Trade, London, England.

RUSSIA.

The "*Official Messenger*" of Petrograd of the 5th January states that the Council of Ministers at its meeting on 4th January approved the proposals of the Ministry of Agriculture that 6,000,000 roubles (at the current rate of exchange) or 5,000,000 roubles (at par) should be placed at the disposal of that ministry for two years for the purchase of reaping and other agricultural machines and implements from the United States, Sweden, and other friendly or neutral countries.

Rouble, 2s 1 and 1/3d. at par or about 1s. 3d. at current rate of exchange.—(*Board of Trade Journal*, February 10th 1916.)

MARKET FOR WRAPPING MATERIALS IN SWITZERLAND.

St. Gall is the embroidery centre of the world and ships annually about \$40,000,000 worth of this merchandise. There is consequently an active demand for wrapping paper and packing materials, which have been and are still purchased in Germany, but are becoming more and more difficult to secure. Local dealers are therefore seeking other sources of supply, and it might be to the advantage of American manufacturers of these materials to forward samples to the leading St. Gall firms.—(*Commerce Reports*, February 8, 1916.)

TRADE EXTENSION AFTER THE WAR.

The Association of the Chambers of Commerce of the United Kingdom, now meeting in London, are considering the following among other important resolutions, for the purpose of promoting trade between British and allied countries.

The War—Terms of Peace.—That no terms of peace should be regarded by the Allies as satisfactory which do not preserve to the Allied Governments full freedom and power to enter into such commercial conventions, treaties and arrangements as they may think desirable in their joint or several interests.

Commercial Union of the Allies.—That it is desirable that the governments of the Allies should at once enter into negotiations with the view of mutually satisfactory commercial arrangements being made for the regulation of trade after the war.

That in such negotiations special consideration should be given to the question of the prohibition of trade with enemy countries until the Allies have entered into such treaties, conventions and arrangements as they may think necessary for the protection of their commercial interests.

Navigation Laws.—That the governments of the Allied countries should carefully reconsider their respective laws with regard to navigation and shipping, with the view of adapting them to their joint and several commercial interests after the war, and that arrangements should be entered into between the Allies for;

(a) Preferential terms to be accorded to Allied shipping entering and leaving the ports of the Allies.

(b) The prohibition of the shipping of present enemy countries trading between the ports of the Allies.

(c) The imposition of a substantial gross tonnage charge on the ships belonging to subjects of an enemy country entering a port of the Allies; and

(d) The enactment of legislation in all Allied countries preventing the establishment of shipping companies or firms in which more than twenty-five per cent. of the capital is held by present enemy subjects.

Banking Laws.—That all Allied countries should at once enact legislation for the purpose of providing that hence-

forth no banking or finance companies or firms wholly or mainly owned by present enemy subjects shall be allowed to be established in their respective countries.

Inter-Imperial Questions.

An Imperial Council.—That His Majesty's Government, in consultation with the Governments of His Majesty's Oversea Dominions, should again consider whether any steps may be taken with advantage to the Empire for the creation of an Imperial Council.

Public Contracts.—That in all public contracts, whether in the case of the United Kingdom or of His Majesty's Dominions, it is desirable that the products of the Empire should be preferred to the products of foreign countries; and that with a view to promoting this result it is suggested that where such contracts cannot be filled in the country in which the supplies are required the fullest practicable notice of the requirements and of the conditions of tender should be given, both in the Dominions and in the United Kingdom, and that the notice should be effectively communicated through official channels as well as through the press.

Navigation Laws.—That the navigation laws of the United Kingdom and the British Dominions should be amended, with the view of securing that the privilege of coastwise trade, including trade between the Mother Country and its Colonies and Possessions, and between one colony and possession and another, shall be refused to enemy countries, and also to other countries in which the corresponding trade is confined to ships of their own nationality.

Trade Statistics.—That it is desirable to secure greater uniformity in the trade statistics of the Empire, and that the Imperial Government be urged to take such steps as may be possible with the view of obtaining this result.

Postage on Newspapers and Periodicals.—That it is advisable to adopt the principle of cheap postage between the different parts of the British Empire on all newspapers, periodicals and trade catalogues and price lists published therein, and that the Imperial Government be urged to discuss the question forthwith with the Governments of the British Dominions.

Unification of Empire Laws.—That the domestic laws of the United Kingdom and His Majesty's Dominions oversea should be made uniform in regard to the following matters:

- (a) The Registration of Firms and Companies.
- (b) Bankruptcy and the Winding-up of Companies.
- (c) Merchandise Marks.
- (d) Patents.
- (e) Trade Marks.
- (f) Designs.
- (g) The Description and Labelling of Foodstuffs and Drugs.

Banking System.—That His Majesty's Government, and the Governments of the British Dominions Oversea, should carefully consider whether, with the view of assisting British trade, any change may advantageously be made in the Banking Systems of the Empire.

FOREIGN TRADE OF CANADA.

(Comparison 1914, 1915, 1916).

IMPORTATIONS.

	Month of January.			Ten Months Ending January.		
	1914.	1915.	1916.	1914.	1915.	1916.
Dutiable goods	\$26,234,666	\$18,183,179	\$27,504,149	\$349,668,743	\$234,008,746	\$225,454,635
Free goods	14,686,574	12,116,978	22,666,516	177,003,982	145,038,331	168,639,353
Coin and bullion	429,627	638,174	11,716,848	13,419,454	131,257,281	31,618,851
Duty collected	7,029,888	5,125,009	9,962,556	90,983,949	63,706,075	81,267,860

EXPORTATIONS.

Exports Month January.

	—1914—		—1915—		—1916—	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Products of Mine	\$4,205,038	\$4,937	\$3,508,769	\$11,363	\$4,654,815	\$7,122
The Fisheries	1,701,844	21,866	1,703,443	6,068	2,437,715	55,697
The Forest	2,159,088	320	1,811,049	644	3,243,360	39,944
Animals and their produce	3,151,012	22,717	5,661,172	127,776	10,203,827	359,454
Agriculture	8,942,529	29,915	8,082,571	45,329	15,402,976	39,927
Manufactures	5,050,999	512,220	7,769,146	1,073,840	47,015,283	1,112,972
Miscellaneous	8,227	75,883	59,448	106,712	773,208	100,746
	\$25,218,737	\$667,858	\$28,595,598	\$1,371,732	\$83,731,184	\$1,715,862
Coin and bullion	150	3,974,614	123	862,884	200	112,536
Total	\$25,218,887	\$4,642,472	\$28,595,721	\$2,234,616	\$83,731,384	\$1,828,398

Ten Months Ending January.

Exports for Ten Months Ending January.

	—1914—		—1915—		—1916—	
	Domestic	Foreign	Domestic	Foreign	Domestic	Foreign
Products of Mine	\$48,423,544	182,860	\$42,469,353	\$2,87,937	\$53,688,992	\$7,272,181
Fisheries	17,782,794	81,820	15,820,794	110,461	18,541,413	141,642
The Forest	38,135,945	591,365	36,867,152	477,634	45,428,289	424,033
Animals and their produce	46,719,871	1,092,469	64,097,884	2,458,200	88,763,256	2,553,417
Agriculture	186,648,698	8,525,402	114,691,494	34,885,845	217,909,912	17,150,981
Manufactures	46,529,453	8,988,817	60,956,072	6,686,842	166,414,552	6,865,568
Miscellaneous	94,094,056	2,675,153	515,888	3,105,714	4,518,818	1,283,835
	\$384,334,361	\$22,137,886	\$335,418,637	\$48,012,633	\$595,265,232	\$35,681,657
Coin and bullion	181	12,096,303	568	5,042,231	315	103,263,555
Total	\$384,334,545	\$34,234,189	\$335,419,205	\$53,054,864	\$595,265,547	\$138,955,212

IN THE EDITOR'S MAIL.

The Sawyer-Massey Co., Limited, Hamilton, have issued an attractive calendar for 1916, on which illustrations of their threshers, gas tractors and road-making machinery are grouped below a charming picture of a girl in rustic costume.

The Canadian Forestry Association are to be both complimented and praised for the admirable little "Boy Scout's Forest Book," just produced for presentation to the sixteen thousand members of the Boy Scout organization in Canada. The objective, of course, is to get the boy scout interested in the highly important task of preserving our forest resources from destruction, and this has been done in a skilful way. By means of numerous interesting illustrations and a letterpress by Robson Black, the well-known author, which is as good as a story, the boys of Canada will undoubtedly be attracted and inspired to do their share for the preservation of the forests. The booklet is distributed free by the Association.

John D. Rockefeller, jr., has republished in a neat pocket size booklet an article which he contributed to the January number of the *Atlantic Monthly* on "Labor and Capital,—Partners," in which he explains the basis of the so-called Colorado Industrial Plan. With it he includes copies of the plan of employes' representation and of the agreement between the company and its employes adopted last fall at the coal and iron mines of the Colorado Fuel and Iron Company. The whole subject is of great interest to employers of labor, for Mr. Rockefeller seems to have evolved a scheme that has its advantages as a preventative of labor troubles. Those who have not had an opportunity to read the *Atlantic Monthly* article may be glad to know that it can now be obtained in booklet form. The place of publication is 32 Broadway, New York.

In pursuance of the policy of market expansion in the interests of the lumber industry, undertaken by the Minister of Lands of British Columbia, two further bulletins prepared for the information of lumber consumers, have recently been printed. They are entitled, "British Columbia Douglas Fir Dimensions," and "British Columbia Western Soft Pine" respectively. The former deals with the qualities of Douglas fir for structural purposes and is of special interest to architects and contractors. The latter takes up the wood known variously as western soft pine, mountain western pine, Arizona white pine, and California white pine, and describes its qualities and uses. Both booklets are well illustrated and attractively produced.

"Windsor, the Logical Location," is the title of a snappy little booklet issued by authority of the Joint Industrial Bureau of the city and intended to demonstrate the advantages enjoyed by Windsor as an industrial centre. The writer of the booklet has played up effectively the strategic importance of the city's location and has shown how well it is supplied with facilities in the way of power, land, labor and means of communication. Information on the Canadian tariff and the expansion of trade is appended and there is a list of the industries already located in Windsor and vicinity, and an excellent map showing the situation of the factory districts in the city.

To produce a good selling booklet is an art. In "Steel Truss Barns," issued by the Metal Shingle & Siding Company, Limited, of Preston, a capital demonstration of what can be

achieved in the making of a really effective piece of advertising literature is given. The most noticeable feature about it, at first glance, is the personal note, which is struck on the first page. President Dolph addresses the farmer, to whom he wishes to sell one of his barns, in the first person. The booklet becomes an intimate, conversational sort of a thing. It is interesting, apart altogether from its main purpose, and even the man who has no barn to build, is attracted by the informative and entertaining way in which the story is told. Of course this is merely the carefully studied way of gaining the farmer's attention, but it must be said that it has been most effectively done. The booklet gives very complete particulars of the steel truss barn, is elaborately illustrated and contains a large number of testimonials.

A beautiful and attractive booklet on the plans of the Toronto Harbor Commissioners for their industrial district has recently come from the press and is being circulated with a view to getting United States manufacturers interested in Canada as a possible location for branch factories. There is much of a convincing character in the booklet, which is elaborately illustrated and handsomely printed on heavy coated stock, and it will no doubt prove an effective advocate of the Commissioners' proposition. However, there are one or two errors in the letterpress which might be pointed out. In the list of branch factories of United States manufacturers in Toronto, there is included that of the British American Oil Co., Limited. This company is a purely Canadian company, having no United States' affiliations.

THE CREOSOTE INDUSTRY.

During the past year, according to the Victoria, B.C., *Daily Colonist*, a shipment of 160,000 creosoted railway ties was made by the Dominion Creosote Company of Vancouver, to India, for the Bengal and Northwestern Railway Company. The Indian railways use annually large quantities of sleepers which have been supplied from Australia, but as Australian timber is becoming scarcer and prices are advancing, it is expected that the British Columbia product will come into more demand.

Although the preservative treatment of wood industry in British Columbia was established only five years ago, it has had a steady growth, particularly in export markets. At present only one plant is in operation, that of the Dominion Creosote Co., but a second is about to be established. The former covers twenty-two acres on the north arm of the Fraser River with river frontage of 1,300 feet. The company operates a sawmill with daily production of 55,000 to 60,000 feet per ten hours; a paving block mill with capacity of 1,600 yards of block paving a day and a creosoting plant with two retorts one hundred feet long.

The projected plant is that of the Vancouver Creosoting Co. This company has secured a site with five hundred feet of waterfront at North Vancouver and expects to build a plant at a cost of \$150,000 by April next.

Including the Dominion Creosote Co., there are four producing plants in Canada, the others being the Dominion Tie and Chemical Co., of Sydney and Winnipeg; the Canada Creosoting Co., Toronto, and Alex. Bruce & Co., Fort Frances.

"Finish each day and be done with it. You have done what you could. Some blunders and absurdities, no doubt, crept in; forget them as soon as you can. To-morrow is a new day; begin it well and serenely, and with too high a spirit to be cumbered with your old nonsense. This day is all that is good and fair. It is too dear, with its hopes and invitations, to waste a moment on the yesterdays."—R. W. Emerson.

Condensed Advertising

WAREHOUSE SPACE TO LET IN WINNIPEG.

"Owing to the transfer of the Sherwin-Williams Co.'s office from their warehouse on Logan Avenue West to factory on Sutherland Avenue, their commodious brick warehouse is to let. Size of the building 50 feet by 100 feet; steam heated, elevator, railway siding, office accommodation, good vault, weighing scales; 2 1-5 acres of land. Two floors and basement, capable of withstanding any weight.

This building will be let from the 1st of March. Apply—The Sherwin-Williams Co. of Canada, Ltd., 112 Sutherland Avenue, Winnipeg."

WAREHOUSE SPACE TO LET IN CALGARY.

"The Sherwin-Williams Co. of Canada, Ltd., have warehouse space to let in the commodious brick building, situated 11th Avenue West, Cor. 7th Street. Separate offices, vault, use of siding, freight elevator, and every modern facility throughout.

Apply to The Sherwin-Williams Co. of Canada, Ltd., 112 Sutherland Avenue, Winnipeg; or Calgary."

FOR SALE.

Clover Leaf Cement Mixer, complete with engine, tongue, water tank, loader frame and loading bucket. Capacity 8 cubic feet. Only used once. Is in first-class condition. Will sell cheap. For further particulars apply to The Stratford Manufacturing Company, Limited.

WAREHOUSE SPACE TO LET IN WINNIPEG.

"TO LET, on and after March 1st, one floor in our modern warehouse on Dewdney Street, opposite C.P.R. station, Regina. Size of building, 50 x 108; steam heated throughout, elevator, railway siding, office accommodation, also good vault in building. Water and heat supplied by ourselves to tenant. The balance of this building is occupied by ourselves and the Northern Electric Co. A splendid opportunity for anyone requiring a distributing warehouse in the West.

"For terms, etc., apply to B. F. Ackerman, Son and Company, Limited, Peterborough or Regina."

CANADIAN MANUFACTURERS—SOUTH AFRICA WANTS YOU.

A well-known manufacturer's agent with sample rooms at Cape Town, Durban and Johannesburg, is desirous of fixing up with really first class manufacturers of hardware, groceries and kindred lines: Terms, a contribution towards travelling expenses and commission: Good turn-over for the right firm. Exceptional references, apply in the first instance to M. M. M., INDUSTRIAL CANADA Office, Toronto.

NEW COMPANIES INCORPORATED.

MacIntyre Granite Quarries & Mfrs., Ltd., Winnipeg, Man.; capital \$60,000.

Perfection Tire & Motor Co., Ltd., Hamilton, Ont.; capital \$1,500,000.

Canada Soaps, Ltd., Toronto, Ont.; capital \$100,000.

The Beamsville Basket & Veneer Co., Ltd., Beamsville, Ont.; capital \$40,000.

International Copper, Ltd., Toronto, Ont.; capital \$150,000.

John Morrow Screw and Nut Company Limited



**TWIST DRILLS
CAP SCREWS
SET SCREWS
NUTS** All Our Product is of the
Highest Possible Grade

We urge our customers to kindly place their orders as far ahead of their actual needs as possible, and we will give them the very best possible service

Ingersoll . . Ontario



TRADE ENQUIRIES

These enquiries come into our hands from various sources. The Weekly Bulletin of the Department of Trade and Commerce, from which the enquiries indicated in the sub-heading allotted to them are taken, should be read regularly by those interested in foreign trade. It will be sent free on application to the Department at Ottawa. The names connected with all those enquiries can be furnished direct from the Commercial Intelligence Department, Canadian Manufacturers Association, Toronto.

DOMESTIC TRADE ENQUIRIES.

386. **Picture Frame Machines.**—A party in Saskatchewan would like to ascertain if there are any manufacturers of machines for cutting picture frame mouldings and holding the frames to be nailed, known as picture frame machines.
387. **Outboard Motors.**—A party in British Columbia would like to get in touch with Canadian manufacturers producing small outboard motors for canoes and boats.
388. **Paper Discs for Barrels.**—We can put manufacturers of these in touch with a firm desiring to obtain them.
389. **High Speed Tool Steel.**—Quantities of this material of Canadian manufacture are desired by a well-known Canadian firm. The same firm has small ends of this material to dispose of.
390. **Steel Safe Cabinets.**—An Alberta firm desires to get in touch with bona fide Canadian manufacturers of steel safe cabinets.
391. **Electrodes.**—A Winnipeg company would like to hear from Canadian manufacturers of electrodes.
392. **Filing Device.**—A patentee of a filing device, especially adapted for use in stores, would like to hear from manufacturers who would be interested in the production of this article.
393. **Paper File Handles.**—We can offer an opportunity to manufacturers to produce file handles made of paper or similar material.
394. **Calcined Magnesite.**—A Winnipeg company is desirous of getting in touch with Canadian manufacturers who are able to supply this material in carload lots.

IMPORT TRADE ENQUIRIES.

395. **Buchu Leaves.**—We are advised by a New York importing house that they are in a position to supply this commodity at a lower price than which it can be obtained through jobbers. If interested please communicate with us.
396. **Papain.**—A commission merchant in Montserrat claims to be able to offer supplies of this material and will be glad to quote responsible houses.

NEPONSET Paroid ROOFING

FOR FACTORIES

IN 18 years' actual service Paroid Roofing has proven its ability to withstand all weather conditions, and to resist fire, even when, as is the case in the railroad roundhouses and other buildings, falling sparks and embers constitute a grave danger.

LOOK FOR THE PAROID ROLL

Paroid is constructed of a fine grade of felt, saturated through and through with nature's own water-proofing, Asphalt. The heat of the fiercest summer will not make asphalt melt and run, as tar does. Choose from 3 finishes—green, grey and red.

Make known your preference for the assured service and satisfaction of the Paroid Roof, and watch that the roll shown herewith is used.

Weather-Proof Fire Resisting



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HAMILTON, ONTARIO

Largest Manufacturers of Roofing, Wall Boards
and Roofing Felts in Canada

Warehouses: Winnipeg, Calgary, Vancouver, Montreal
Halifax, St. John, Edmonton

EXPORT TRADE ENQUIRIES.

397. **Milk Powder.**—Enquiries are made for supplies of this commodity for the English market.
398. **Aluminum Powder.**—Enquiries are made for supplies of this commodity for the English market.
399. **Representation in Belgium After the War.**—We have a communication from a Belgian offering his services to Canadian manufacturers who wish to be represented in Belgium after the war. His place of business is in Ghent, and he will furnish references concerning his solvency and ability.
400. **Enamel Ware, Packing Paper, Dried Milk, Bottles and Brushes.**—A party in London, England, offering references, wishes to get in touch with manufacturers of the above lines who are interested in developing export trade to England.
401. **Cold Storage Goods, Food Stuff, Lumber, Etc.**—A party in Havre, France, offering bank references would like to hear from Canadian firms desiring representation in France.
402. **Paper.**—A party in British Columbia is desirous of getting in touch with paper manufacturers who desire to introduce their products into India.
403. **Glass Bottles.**—A London firm of mineral water manufacturers are in the market for glass bottles.

404. **Loose Leaf Systems, Filing Cabinets, Etc.**—A London firm in the stationery trade would like to get in touch with Canadian manufacturers of the above and similar devices with a view to representing them in England.
405. **Agency.**—An English engineer enquires for Canadian engineering firms who are considering the appointment of an agent in London.


EXPORT TRADE ENQUIRIES TAKEN FROM THE WEEKLY BULLETIN OF THE DEPARTMENT OF TRADE AND COMMERCE.

406. **Pastry and Meat Boards, Rolling Pins, Etc.**—A London company is open to purchase supplies of pastry and meat boards, also rolling pins and towel rollers, and invite offers from Canadian manufacturers.
407. **Wall Board.**—A Durban firm asks for correspondence from Canadian wall board manufacturers with a view to taking up agency.
408. **Box Shooks.**—One of the largest box using industries in South Africa is desirous of purchasing their boxes from Canada. For further information and specifications of boxes required see page 168, Weekly Bulletin No. 626.
409. **Picture Mouldings.**—A London picture framing company invites quotations c.i.f. London from Canadian manufacturers of picture mouldings, 2, 3, 4 and 5 inches wide, in the white.
410. **Carriage and Wagon Material.**—A Durban importer of carriage and wagon material requests catalogues and f.o.b. Canadian port prices.

RED SEAL**LUXACOTED PORCELAIN**

For Illustrated Catalogues,
Instruct your Printer to use
the Best Coated Paper.

IT'S MADE IN CANADA BY
RITCHIE & RAMSAY, Limited
TORONTO



Where "Time is the Essence of the Contract"

you can't afford to let your men use inefficient tools.

Yet the probability is that they are wasting time trying to get the last bit of wear from their files.

At a certain point in the lifetime of a file, the time lost in its use is money wasted.

By using a half-worn file your men may be slowing up a contract that means thousands of dollars to you.

They'll do better work with a new file—in less than half the time. And the saving goes into **your** pocket.

But, be sure the files used are of the following brands:

**KEARNEY & FOOT - GREAT WESTERN
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The Files with our 50 years' experience at back of them. They last!
Write for our FREE copy of "File Philosophy."

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**DARLING BROTHERS
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\$141,017.00 worth of abrasive wheels imported into this country in the last fiscal year, that should have been "MADE IN CANADA."

We can furnish the Canadian made goods of the best natural and artificial abrasives, by the vitrified or silicate process; in the latter, with or without the wire web.

Can be obtained from the following supply houses:

J. R. BAXTER & CO., LTD.
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H. W. PETRIE LTD.
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McDOUGALS LTD.
Ottawa

COWAN HARDWARE CO.
London

WALKERVILLE HDW. CO.
Walkerville

NORTHERN CAN. SUP. CO.
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Or direct from the manufacturers,

DOMINION ABRASIVE WHEEL CO., LTD.
NEW TORONTO, ONT. CANADA

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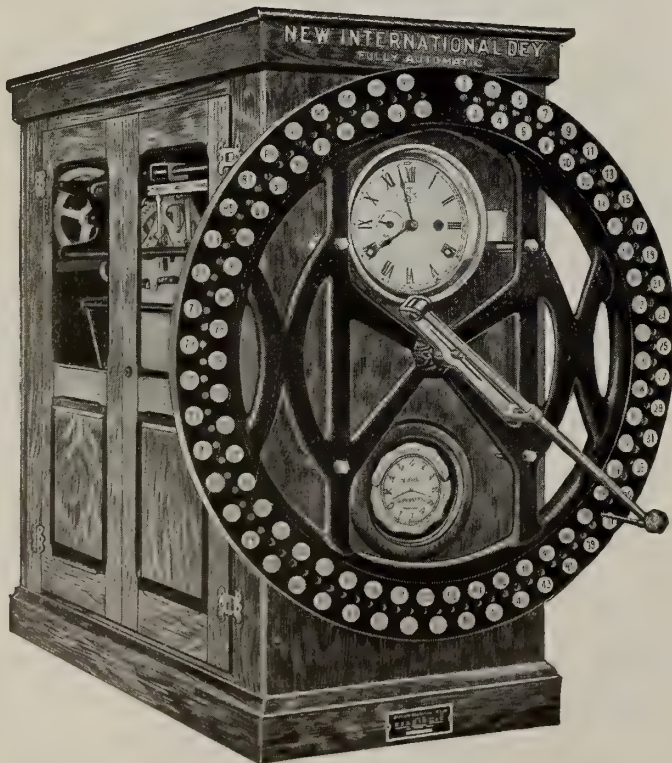
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TIME costs you money. You buy it just as you buy a raw material. Why not check its delivery, its use, and the profits on its re-sale with the same accuracy that you check these factors in the working up of a raw material?

Checking time is even more important, because time lost can never be regained.

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Phone M. 7025

Nobility in Overalls

In these stirring times many remarkable labor incidents are being recorded. The illustration shows Lord Norbury, one of England's wealthiest noblemen, going to his job as fitter in an aeroplane factory in overalls, and "ringing in" on an



Lord Norbury
"ringing in" on an
"International"

International Time Recorder

The International Time Recorders play no favorites—lords or laborers, it gives the same automatic record—accurate, indisputable—made by the employee himself.

The International is the choice in the great factories of the world for checking the cost of labor, saving money. It will do the same for you.

There is an International Time Recorder and System that exactly fits your business, no matter how peculiar your requirements may be—ready to guard every minute of the time you pay for.

The International will soon discharge its debt and bring you in profitable returns from the time saved and the efficient service given.

WRITE US FOR FULL PARTICULARS

The prices range from \$95.00 up.

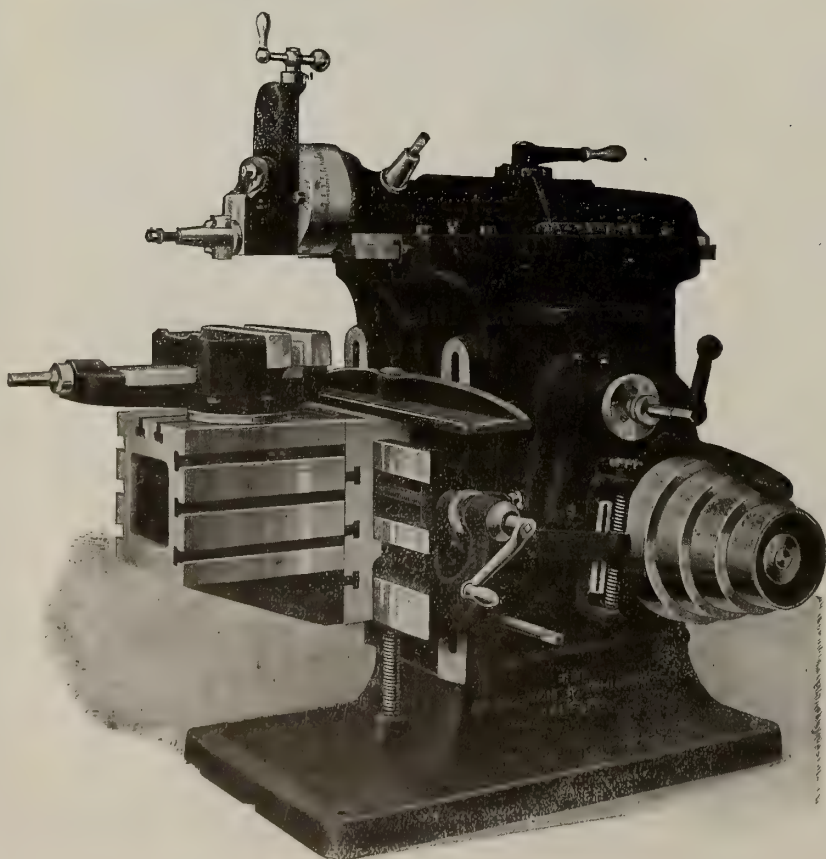
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411. **Oil Cans, Screw-drivers, Bottles and Machines.**—A French firm desires to receive the names and addresses of Canadian manufacturers of the following articles in large quantities: Oil cans for sewing machines, small screw-drivers for sewing machines, small bottles for vaseline oil, sewing machines, and knitting machines.
412. **Belting.**—A Huddersfield firm would like to hear from manufacturers of leather belting.
413. **Picture Frames.**—A Birmingham firm is open to purchase composition mouldings, gilt slips and flats, also oak mouldings.
414. **Enamelware.**—A Birmingham commission agent with large connections wishes to represent a manufacturer of all kinds of enamelled household utensils, also utensils made of sheet metal.
415. **Crude Magnesite.**—A Manchester firm of chemical merchants wishes to be placed in touch with Canadian exporters of crude magnesite. They are prepared to purchase large quantities.
416. **Cider.**—A Birmingham firm is open to purchase Canadian cider; can take large quantities.
417. **Handles.**—A Staffordshire firm inquires for ash hammer and sledges handles.
418. **Glass Bottles.**—A London firm of mineral water manufacturers are in the market for glass bottles, and ask for names of Canadian makers.
419. **Three-ply Wood.**—A London firm inquires for Canadian exporters of the above.
420. **Molybdenite, Scheelite and Wolfram Ores.**—A Glasgow firm desires to communicate with Canadian exporters of the above.
421. **Fire-clay, Mineral Products.**—A Paris consulting engineer has a market for such products as chromite, molybdenum, asbestos, scheelite, corindon, kaolin, and invites correspondence with samples to permit reasonable tests.
422. **Fish Boxes.**—A Newfoundland fish-packing concern requiring one million to one million and a half wooden boxes a year, in sizes 1, 2, 5 and 10 pounds, desires to enter into communication with Canadian manufacturers. Sample boxes can be obtained upon application to the firm.
423. **Floor Canvas, Etc.**—An important importing and exporting firm in Newfoundland asks for names of Canadian manufacturers of oilcloth, floor canvas and moroccos.
424. **Asbestos.**—A large importing house in Glasgow wishes to receive quotations for asbestos cement slates and sheets.
425. **Barytes.**—A Glasgow house would like to receive samples of barytes for paint manufacture, and to purchase in lots of 100 tons or so.



SEND FOR CATALOGUE

If you want a machine that will stand up under the heaviest kind of work, send for the description and specifications of our

SHAPER

It is accurate, reliable and capable of sustaining the wear of continuous operation.

MADE IN CANADA

The
D. McKenzie Machinery
Company
GUELPH - - - ONTARIO



Walls, white or covered with foliage paper, with blue or grey predominating; woodwork white; rugs, plain dark blue centre with floral border; hangings dark blue; pictures, eighteenth century sporting prints or reproductions of Gainsborough, Reynolds or Romney.

A Chippendale Dining Room Suite

By the Toronto Furniture Co., Limited

"MANY A THING DIVINELY DONE BY CHIPPENDALE AND SHERATON."—Andrew Lang.

OF ALL furniture, that made by Chippendale is surely the most beautiful and practical. Beautiful because of its delicate carving, graceful curves, perfect proportions and soft, deep-toned coloring; practical because in everything pertaining to design, Chippendale subordinated all other elements to that of structural stability. ¶ In our replicas of Chippendale furniture, we have reproduced with fine sympathetic feeling and admirable skill the beautiful decorations, simple chaste lines, perfect proportions, and clear luminous finish that make the originals so delightful. ¶ The very simplicity which you admire in this Chippendale suite enables us to produce it at a price at least no higher than that demanded for ordinary furniture, lacking its distinction of style and finish. We invite you to view this and other notable periods in our line at the leading dealers in your locality.

TORONTO FURNITURE CO., LIMITED

Show Rooms and Cabinet Shops: 163-187 Dufferin Street, Toronto, Canada

STRUCTURAL DETAILS

Sideboard—25 in. x 66 in. Has five drawers and three velvet-lined trays for table silver. May be had with or without mirror back. All drawers have dust-proof bottoms. *Table*—54 in., 8 or 10 ft. extension. *China Cabinet*—May be had with or without drawers. *Serving Table*—22 in. x 43 in. *Chairs*—Upholstered in leather or tapestry. *Wood*—Mexican mahogany, finished in antique, rubbed to a dull egg-shell gloss.



Look for the Shop Mark inside the drawer.

AMONG THE INDUSTRIES

Under this heading are published items of news of current interest concerning the activities of Canadian manufacturers. Information about changes of interest, enlargement of plants, and plans for future developments are always welcome, and are published free of charge, provided they should not be properly classified as advertisements.

*Items prefixed with an asterisk are based on official information received in each case from the companies mentioned. Other items, while secured usually from reliable sources, have not the same authoritative origin.

ALBERTA.

Calgary.

It is reported that work will start at once on the construction of the J. C. Boyle Packing Plant, the estimated cost of which, with equipment, is a million dollars.

The Ford Motor Co. of Canada will build an assembling plant here at a cost of \$200,000. It has secured a site at Eighth Street West and Eleventh Avenue. The initial building will be 130 x 200 feet, four storeys high.

Edmonton.

The plant of the Emery Mfg. Co., manufacturers of overalls, dresses and shirts, was destroyed by fire on the night of February 7, causing a loss of upwards of \$100,000. About seventy persons, mostly girls, were thrown out of employment.

The Great West Garment Co., 10438, 97th Street, are reported to be planning to build an addition to their factory.

Wainwright.

The mill of the Wainwright Milling Co. was completely destroyed by fire last month, with a loss of \$25,000. Tenders for its reconstruction will be called early in April.

BRITISH COLUMBIA.

Esquimalt.

Owing to the shipyards on the Clyde being full up with work, Yarrows Ltd. have turned over to their subsidiary company at Esquimalt, B.C., the construction of a shallow draught steel river steamer for delivery to India. The vessel will be 135 feet in length and draws only two feet.

McGillvray.


The sawmill owned by the Riverside Lumber Co., Calgary, was destroyed by fire last month with a loss of \$65,000.

North Vancouver.

Negotiations are under way between the municipality and the Amalgamated Drydock & Engineering Co., looking towards an arrangement whereby the Company will receive certain concessions. The Company proposes to build a large drydock and shipbuilding plant at an estimated cost of \$5,500,000, and has asked the city to guarantee its bonds to the extent of \$750,000.

Ocean Falls.

A large force of men has gone north to the plant of the Ocean Falls Co. to complete the work of overhauling and installing the new paper-making machinery, and a force has



Hydro lowered the Rates

Hydro has been responsible for cutting the price of electricity in Toronto in half.

If you don't fully realize what this means to you in dollars and cents, look up some of your old bills for current and compare them with present bills.

Hydro deserves and asks your support.

Toronto Hydro-Electric System

226 Yonge Street Adelaide 2120

McGregor of Ford

RECENTLY ONE OF OUR FRIENDS FROM ACROSS the line was standing on the sidewalk in one of our larger Canadian cities viewing a march past of some of our soldier boys. The Kilties were going by.

"How typically Canadian are the kilties," he remarked. "We on our side of the big pond associate the Highland uniform as much with Canada as with Scotland. Why is it?"

The reply was to the effect that it was because the Scotch had contributed so largely to the settlement and upbuilding of the Dominion and so many Canadians of Scottish ancestry had made themselves worthy of high ranks in the history of Canada.

Among these Canadians of Scotch parentage who have won a place among Canada's great builders of industry we must reckon Gordon M. McGregor, of Ford, Ont.

About the year 1850 Mr. McGregor's grandparents set out from Glasgow, Scotland, to settle in what was then a new and far away country—Canada.

A few years later we find them located at Sarnia, Ontario, where a son, William, was born.

When still a young man, William McGregor took a very active interest in the business and political life of the country and was elected a member of the Dominion Parliament, serving his country and his district well and faithfully for twenty years.

Gordon McGregor, about whom this is written, was the son of William McGregor, and was born at Windsor, Ont. As Gordon McGregor grew to manhood he capably assumed much of the business cares of his father.

William McGregor eventually became interested in the Walkerville Wagon Co., at Walkerville, Ontario, and, shortly after, his son, Gordon McGregor, was made manager of the firm. Here the son began to show that business foresight that has made him one of the prominent figures in the business world of Canada.

About this time an event took place in the carriage and wagon industry that caused the greatest concern. This was the advent and the establishment of the automobile as a practical vehicle.

Some dealers and builders were so alarmed that they thought their business would go to immediate rack and ruin and that the auto would supersede horse-drawn vehicles entirely. Others were cool-headed enough to see the advantages that this new industry afforded and governed themselves accordingly.

Among the latter was Gordon McGregor, who believed that he could successfully enter upon the business of manufacturing automobiles, and looked about him for wise methods of doing this.

He got in touch with many manufacturers and looked over many makes of cars. Finally, he decided on one make and effected arrangements for its production in this country. The car he chose was the Ford.

He then tried to induce some of his friends in Canada to invest in the project, and encountered all the usual cold, disheartening difficulties attendant upon the organization of a new and untried proposition. If they could have but looked ten or eleven years ahead he would have had no worries over the organization of a company even double or quadruple the size.

No stock was offered for sale outside of the Dominion until all Canadians had been given an opportunity to subscribe.

Finally, in August, 1904, they organized the company with a capital of \$125,000.

Then came the difficulties of manufacture, and for three years it was a constant struggle to win success.

But success came and a greater success than the founders ever dreamed of—a success abounding in truly marvellous facts and figures.

And this is the story of Gordon McGregor of Ford, Ontario, and of the establishment of the Ford Motor Company of Canada, Limited.

To-day, half the population of four towns depend upon the Ford Company of Canada for their earnings. These are Ford City, Walkerville, Windsor, and Sandwich.

The last census states that the average family consists of five persons. As there are over 3,000 employees in the towns mentioned above whose work is devoted to the manufacture of Ford cars, this official census figure shows that there are over 15,000 people that look to the Ford Company for their support. This does not include the nine cities in Canada in which Ford branches are established, which would add over 3,600 more.

And Ford employees are paid three times as well as the average, as shown by Government wage reports.

In April, 1915, a time when most Canadian manufacturers were following a policy of retrenchment, the present Ford schedule of wages was adopted by which the company virtually handed to its employees \$50,000 a month increased wages and reduced the working hours from nine to eight per day.

Surely, this is a great boon to Canadian workmen and their families. It is a boon to Canadian merchants who benefit by the increased purchasing power of all these families. It is a boon to the entire country in time of war, when living expenses are higher than ever before.

And these employees have responded in like measure to the Empire's need for her people's support, Ford City alone having made what is probably a record contribution to the Patriotic Fund of \$34 per capita.

More than 300 Ford employees have enlisted for overseas service, and the Company is spending thousands of dollars in moving pictures which are offered free to assist in recruiting work all over the Dominion.

What an immense expression of confidence in the ultimate and unquestionable success of British Arms and the allied cause was this great wage increase!

But it was not the only evidence of the Ford Company's faith in the Empire.

Before the outbreak of hostilities the company decided to reduce the price of the car by \$60. When the war came upon us the company might well have been pardoned for withholding this reduction for a time. But they never even considered it. The reduction was made the same day war was declared.

And you can realize how real this confidence in the victorious prosperity of Canada was when you consider that the prices of Ford cars are set in accordance with the estimated production for the coming fiscal year, and not by any means are they based on the profits of the preceding year.

\$652,000 has been spent on new buildings in Ford City since the war began.

Over \$1,000,000 has been spent on new buildings in four Canadian cities since war began, making a total expenditure for new buildings of approximately a million and three-quarters.

\$1,000,000 has been spent in new equipment since war began.

900 men have been added to the pay roll since war began.

And if there is needed further proof of this company's absolute conviction in the progress and prosperity of the Dominion, it may be found in the fact that another \$60 reduction in the price of the car was made last August—making a total reduction of \$120 since war began.

This new price requires an output of 40,000 cars this year.

Then, too, the price of Ford parts has been reduced by \$147 per car—a reduction that means a big increased economy to Ford owners.

Such immense expenditures and price reductions as these are of the greatest benefit to the general welfare of the nation under existing conditions. They form one of the greatest possible influences towards boosting the prosperity of Canada.

Remember, that all but \$16.88 worth of the material that goes into the construction of a Ford car is bought here in Canada—and it would all be bought here if it were possible to get it.

Truly, the Ford is, after all, a Canadian Car, built by Canadians. Very few Canadian manufacturers are able to show such a support to Canadian industry as this.

The Canadian Ford Company is basing this year's factory production plans on just double the business done last year.

They stake everything on the conviction that Canada is bound to prosper. They place all on the belief that Britain and her allies are bound to win.

McGregor of Ford and his Canadian associates may be pardoned for feeling proud of this record.

Cable Address : DANMANCO

The Danville Manufacturing Co. Limited

Manufacturers of

**WOODEN SHOE SHANKS
BROOM HANDLES, SKEWERS
PAPER ROLL PLUGS, &c.**

Danville, Que.

Get Our Prices for Broom Handles of All Kinds.

NOTICE

The following are the Factory Inspectors
for the Province of Ontario:



JAMES T. BURKE, Chief Inspector, Toronto
W. T. E. BRENNAGH, Port Arthur
H. A. CLARK, Toronto
MISS M. CARLYLE, Toronto
W. S. FORSTER, Ottawa
A. W. HOLMES, Toronto
ROBT. HUNGERFORD, Toronto
FRED KELLOND, Hamilton
S. J. MALLION, Stratford
MRS. A. BROWN-REDDICK, Toronto
H. J. TUTT, Toronto

Persons having business with any of the Inspectors should communicate
with them at the Parliament Bldgs., Toronto.

Phone Main 5800

HON. JAS. S. DUFF,
Minister of Agriculture.



NOTICE

**To Manufacturers, Dealers
and Users of Steam Boilers.**

All steam boilers built in, or entering the Province of Ontario, and
boilers exchanged or repaired, are subject to Government Inspec-
tion as prescribed in the Steam Boilers Act, 3 George V., C. 61.

*Before any work of repair or alteration is commenced
on any boiler, notice must be sent to the Department stat-
ing the nature and extent of the repairs or alterations pro-
posed to be made. If the Chief Inspector should consider
such repairs or alterations of an extensive character, the
boiler must be inspected in accordance with the Regula-
tions by an Inspector authorized under the Act.*

All communications should be addressed to the Steam Boiler
Branch, Department of Public Works, Parliament Bldgs., Toronto.

HON. FINLEY G. MACDIARMID, D. M. MEDCALF,
Minister of Public Works, Chief Inspector of Steam Boilers.

NOTICE

TO STATIONARY AND HOISTING ENGINEERS

Everyone operating a STATIONARY steam plant of 50 h.p. or
over in the Province of Ontario must hold a Stationary Engineer's
Certificate from the Board of Stationary and Hoisting Engineers.
Anyone operating such a plant without a Certificate is liable to the
penalties set forth in the Stationary and Hoisting Engineers' Act.

Everyone operating a HOISTING steam plant working at a
pressure of 20 pounds or over irrespective of horse power, and used
for hoisting in structural operations or excavating purposes in the
Province of Ontario, must hold a Hoisting Engineer's Certificate
from the Board of Stationary and Hoisting Engineers. Anyone
operating such a plant without a Certificate is liable to the
penalties set forth in the Stationary and Hoisting Engineers' Act.
Application forms for obtaining STATIONARY or HOISTING
Engineers' Certificates, may be had upon applying to the Chairman.

Hon. JAS. S. DUFF,
Minister of Agriculture.

W. C. MCGHIE,
Chairman of Board.

been put into the woods to cut lumber. The plant will be
ready to operate next fall, under the management of the
Pacific Mills Ltd., turning out mechanical and chemical wood
pulp and also newsprint, book paper and kraft. The output
of paper will be one hundred tons daily, in addition to pulp.
About 750 men will be employed. The old Ocean Falls Co.
manufactured pulp only and not paper.

Port Moody.

Construction of the Port Moody Steel Works plant is pro-
ceeding rapidly and it is expected to be in operation in a
couple of months. The rolling mill will turn out angle and
channel.

Port Alberni.

The Canadian Pacific Lumber Co. have leased their mills
here to interests connected with the Dent Lumber & Shingle
Co. and the Anchor Supply Co. of Seattle. The mills have a
capacity of 100,000 feet a day, and H. A. Dent states that
the mill will be operated to its full capacity by March 10,
when two hundred men will be employed. The cash consid-
eration paid by the new company was \$250,000. Mr. Dent
says that he and his associates are particularly pleased with
the location of the mill, as it is suited to the Alaskan and
Northern trade which the company will enter. The products
of the mill will be shipped to Alaska and other northern
points in bottoms, which the Dents are now negotiating for.
The head offices of the mill will be at Seattle.

Vancouver.

The American Can Co. recently awarded a contract for the
erection of a four-storey, 125 x 130-feet, addition to their plant
here, the cost being between \$60,000 and \$70,000.

The British Columbia Copper Company, Ltd., will erect
a 2,000 ton mill to handle ores at Copper Mountain, where per-
manent development work will be commenced shortly.

By order of the court the assets and plant of the B. C.
Fisheries, Ltd., will be sold by tender. The estate comprises
cannery at Aliford Bay, fertilizer plant, oilery, and various
equipment at Skidegate and Vancouver.

A fruit cannery will be established this season at Keremeos
by Mr. Osser.

The Dominion Rotary Products Co. have arranged with the
Ross & Howard Iron Works at Vancouver for the manufacture
in Vancouver of rotary compressors used in mining. The
rotary compressor is much more compact and lighter for trans-
portation than the types of compressors hitherto in use, and
it is claimed for it that it has great advantages in cost of
transportation in a mountainous country like British Colum-
bia, while the power required to drive it is considerably less.

MANITOBA.

Winnipeg.

The Manitoba Steel Foundries, Ltd., which was incorpor-
ated recently with a capital of \$100,000, is a branch of the
Manitoba Rolling Mills Co., Ltd., whose plant at Selkirk, Man.,
is completed, but has not yet commenced operations. The
Manitoba Steel Foundries, Ltd., will install an electric steel
furnace, of which there are as yet only one or two in this
country. They intend to make billets. Peter J. Smith is the
general manager, and has offices at 1006 Electric Railway
Chambers, Winnipeg.



REG. U. S. PAT. OFF.

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Leather Substitute
Guaranteed Superior to Coated Splits

FOR AUTOMOBILES

FABRIKOID, MOTOR QUALITY, is the standardized upholstery material now used by many of the largest makers of automobiles.

RAYNTITE TOP MATERIALS are rain-proof and guaranteed not to leak for one year, but will last the life of the car.

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FABRIKOID, CRAFTSMAN QUALITY, has the luxurious appearance of leather and is more durable than that made and sold as "genuine" leather.

Special grades for novelty, stationery and bookbinding requirements and for vehicle and railway car upholstery.

TELL US WHAT YOU MAKE, AND WE WILL
SEND SAMPLES AND PRICES

DU PONT FABRIKOID CO.

World's Largest Producers of Leather Substitutes
TORONTO, ONTARIO WILMINGTON, DELAWARE

NEW BRUNSWICK.**Kedgwick.**

The lumber mill of the Richards Manufacturing Co. has been entirely destroyed by fire. Plans are being prepared for rebuilding on a larger scale.

Moncton.

On the evening of February 20 fire destroyed the main building of the Record Foundry & Machine Co. Fortunately it did not reach the munitions building or the buildings on the Foundry Co.'s premises being fitted up for barracks for the 145th Battalion. The fire is believed to have started in the men's washroom and it spread very rapidly in all directions. In the buildings destroyed were the offices, sales and shipping rooms, fitting and nickel finishing departments. The contents of the buildings, including plant, stock, patterns, etc., were valued at about \$150,000 and the damage is placed at nearly \$100,000. There were forty hands employed in the destroyed buildings, but owing to the company having a duplicate plant these employees were enabled to work as usual the following day.

St. John.

The firm of Connors Bros., who have a large fish canning and sawmill plant at Black's Harbor, Charlotte County, have contracted with an English mining firm to supply 5,000 cords of pit props. The wood is now being cut, affording employment to a large number of men and teams. Spruce and fir are the woods that are being used. This is a new industry for New Brunswick.

"Metallic" Building Materials

For rush construction of a temporary nature, use these easily-erected fire-proof materials:

"Metallic" Clapboard Siding

Wood sheeting is unnecessary—nail it right on to the studding. Very handsome—something "different."

"Eastlake" Galvanized Shingles

Weather-proof, fire-proof and very durable. "Eastlake" roofs, 30 years old, are in splendid shape to-day.

"Empire" Corrugated Iron

Every sheet true and uniform. Makes easy, rapid, fire-proof construction.

Write to-day for prices and suggestions

The Metallic Roofing Co., Limited

Manufacturers
TORONTO WINNIPEG



COTTON & WOOL WASTE

PACKED AT OUR

DOMINION WASTE FACTORY TORONTO

THE GUARANTEE WITH OUR

Washed Cotton Wipers

All wipers have been hand selected, hard and starchy parts and buttons, etc., removed, sleeves and other closed parts opened and subjected to a thorough washing, rendering absolutely sanitary.

Write us for prices on our brands

SELECT WHITE MIXED COLORED
DARK COLORED

SCYTHES & COMPANY, LIMITED
Manufacturers and Jobbers, Toronto, Montreal

WASHED COTTON WIPERS

NOVA SCOTIA.**Windsor.**

It is reported that the Nova Scotia Underwear Co., which is fitting out the old cotton mill building here, will have its plant ready for operation in April. The Company was formerly located at Eureka, but lost its plant there in a big fire a few months ago.

ONTARIO.**Brampton.**

The council have under consideration a proposal to establish a rubber and tire factory here. Frank D. Law is interested in the scheme. A by-law will be voted on.

Brantford.

Fire at the plant of the American Radiator Co. here on February 4 did \$1,000 damage.

Campbellford.

The paper mill of the Northumberland Paper and Electric Co. was destroyed by fire on Sunday, February 13. The blaze broke out in the roof of the machine room, and just how it originated is a mystery. The flames spread with amazing rapidity, and the building was totally wiped out. The mill was equipped with seven beating and three Jordan engines, one 48-inch binders' board machine, and one 70-inch five cylinder. The company made straw board, filled board and pulp board, as well as binders' board and tarred and plain sheathing papers. The output was twenty tons a day, and the plant has been exceptionally busy. The loss was \$125,000, which is fairly well covered by insurance. The company has decided to rebuild at once on a large and more up-to-date scale, on

practically the same site, which is on the west side of Ranney Falls, just south of the town. Some fifty hands were employed in the mill, but arrangements have been made so that none will be out of work. The company also operates a ground wood pulp mill, which has a capacity of twenty-five tons per day. This industry was not touched by the flames.

Chatham.

*The new factory being erected here by the Dominion Sugar Company, Limited, of Wallaceburg and Berlin, will have a capacity of 1,500 tons of beets daily, this being 300 tons more than was originally planned. C. H. Houson, Secretary-Treasurer, states that this year 30,000 acres of beets will be contracted for, as against 18,000 acres last year. This amount has not as yet been secured, but the farmers are responding well, and the company expects to have fully 30,000 acres under contract before planting commences. Mr. Houson says the company is now growing all its own beet seed in this country, so that the industry is absolutely independent of all foreign countries for its supplies. So far as the equipment of the new factory is concerned, practically all the special machinery required has been purchased, the company being fortunate in getting most of the heavy purchases made before the advances in steel prices.

The American Well Works Co., of Aurora, Ill., have started putting the local plant into shape for manufacturing operations. The company make well drilling outfits and pumping machinery. F. J. Lukins will be manager of the Canadian branch.

The C. & W. Shoe Co., of London, Ont., propose moving their business to Chatham, providing the by-law carries on March 6. The company purpose taking over part of the Wolverine Brass Works, now vacant. Edward Hunt, of London, is interested.

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BOECKH'S BROOMS

for FACTORY AND MILL USE

Are machine made and are superior in every particular to the ordinary make, as same are solidly constructed so as to hold their shape until entirely worn out.

We personally select fine, tough Illinois Corn for our Brooms direct from the growers, enabling us to give the lowest market prices consistent with quality and workmanship at all Seasons of the year.

We guarantee each and every Broom to possess great tensile strength and elasticity, which means long and satisfactory wear, and if found defective in any way after proper use, same will be replaced without charge.

WRITE FOR DESCRIPTION AND PRICES, ETC.

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THE BOECKH BROS. COMPANY, Ltd.

TORONTO : ONTARIO



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1/8 TO 4 INCH

Thoroughly inspected and tested
to 600 lbs. pressure and branded.

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SELLING AGENTS:

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BAR IRON AND STEEL

Colonial Wire Mfg. Co., Limited
WIRES, WIRE NAILS, WOOD SCREWS, ETC.

WORKS: LACHINE CANAL

MONTREAL, CANADA

Cobourg.

*A. J. Kimmel, late President of the Canadian Consolidated Felt Co., Berlin, has organized a company which has acquired the entire capital stock of the Cobourg Felt Company, Limited. The capacity of the plant will immediately be doubled, the buildings being large enough to admit of the duplication of all machinery. The new officers of the company are: A. J. Kimmel, president; Armond C. Kimmel, late manager of Elmira Felt Co., Limited, Elmira, manager; J. F. Kimmel, late superintendent of Kimmel Felt Co., Limited, Berlin, superintendent of felt manufacturing; A. D. Vise, late superintendent of plant and machinery, Berlin Felt Boot Co., Berlin, superintendent machinery and plant. The company will manufacture felt and felt footwear.

Elora.

It has been announced that the Elora Textile Company, Limited, with mills at Elora and Hawkesville, is in liquidation. The company was organized in 1914, operating the Elora mill on astrakhans and novelty cloakings. In 1915 the Hawkesville mill was purchased and overhauled to manufacture hosiery and knitting yarns. David F. Stewart is the proprietor and manager.

Fort Erie.

The directors of the International Safe Co. at a meeting held here recently decided to build an addition to the plant, which will double the capacity.

Fort William.

Plans are in preparation for a feed mill to be built on the river front for the Ogilvie Flour Mills Co., Limited, at an estimated cost of \$150,000.

Gananoque.

*A report in the technical press to the effect that the Steel Company of Canada had taken over the plant of the Gananoque Bolt Co. comes rather late, since the Gananoque company was absorbed by the former company six years ago and has been operated by it ever since.

Grimsby.

At a meeting of the shareholders of the Northern Veneer Company, held at the head office here, it was decided that the company go into voluntary liquidation. McLeod, Tew and Company, of Hamilton, were appointed assignees. The concern has been losing money through lack of funds and apparent mismanagement. The company was capitalized at \$200,000 and manufactured baskets and other supplies for fruit growers of the Niagara Peninsula.

Messrs. Hess have sold out a large part of their interest in the Canadian Steel Specialty Co., and a new company will be formed, to be known as the Canadian Steel Specialty Company, Ltd., with a capital stock of \$100,000. Harry Hess will remain with the new company as superintendent of works.

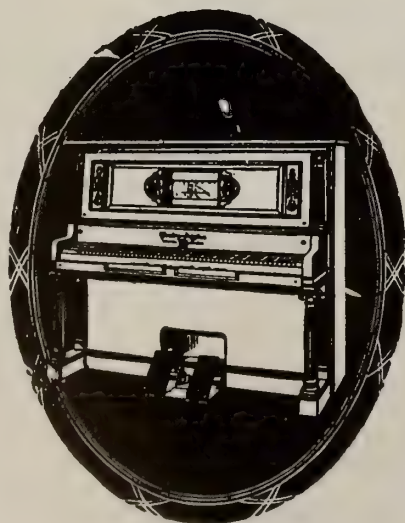
Guelph.

Alexander Callander, formerly of the Taylor-Forbes Co., is erecting a small foundry here for the manufacture of the smaller articles made in a moulding shop. The building will be 50 x 100 feet and the plant will cost \$8,000. The work to be taken up first will be that of making small castings, for individuals and small companies, and already it has been intimated to the management that there are plenty of such orders in the city to do business on. Eventually it is hoped that should success attend the enterprise, stoves will be manufactured in the factory. The building is to be situated on the York road, the first lot over the C.P.R. tracks.

Men forget business cares in the enjoyment of

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Player-Pianos



A GOURLAY-ANGELUS provides ANYONE with the ability to play ANY music artistically.

In the opportunity for recreation thus afforded, many busy men find enjoyment hitherto undreamed of, as well as a complete rest from the business worries and cares of the day. If you find it hard to leave these cares behind you when you go home, depend upon it, a Gourlay-Angelus will make you forget them.

One Toronto manufacturer tells of this pleasure in a Gourlay-Angelus as follows:—"I have always been glad I purchased the Gourlay-Angelus. The longer I have it the more I enjoy it and the more I use it."

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Capital Paid Up - - - \$11,560,000
Reserve & Undivided Profits \$13,236,000
Total Assets - - - \$200,000,000

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RESERVE FUND, \$13,500,000

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S 57

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Sailings 20th of each month.

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New Zealand Shipping Company, Limited

CANADA

TO

Australia and New Zealand

Regular monthly sailings from Montreal in summer and St. John in winter, calling at Adelaide, Melbourne and Sydney (Australia), and Auckland, Wellington, Lyttelton and Dunedin (New Zealand). Sailings 20th of each month.

Through bills of lading issued to all points in Australia, New Zealand, Tasmania and other islands of Oceania.

Marine Insurance effected at rates equal to those given from New York.

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**The New Zealand Shipping Co.
LIMITED**

213 Board of Trade Building, Montreal

The Loudon Machine Co. purposes making an extension to its factory at an estimated cost of from \$15,000 to \$20,000.

Haileybury.

The Riordon Pulp and Paper Co. are erecting a rossing plant here for barking wood intended for their sulphite mill at Merritton.

Hamilton.

*Tallman Brass & Metal Co., manufacturers of babbit metal, brass and aluminum castings, finished brass goods and electric fixtures, have just completed an addition to their plant, increasing their floor space by 20,000 square feet. They have also installed a quantity of new machinery. Three hundred employees are now on the pay-roll.

It is currently stated that the United Gas and Fuel Co. have decided to build a two million dollar coke oven plant, work to commence early in the spring.

The Globe Electrical Machine Co. have removed to larger premises on Mary Street, where additional equipment has been installed for the manufacture of cutting-off machines, turret lathes and special machinery for shell manufacture.

An addition is being made to the offices of the National Steel Car Co., Kenilworth Ave., at a cost of \$10,000.

Hespeler.

The plant of the A. B. Jardine Co., which was damaged by fire last month, will be rebuilt. The loss occasioned by the fire was about \$75,000.

Lindsay.

Work on the new chemical plant to be erected here by the Hodgson Brothers Charcoal Co., of Owen Sound, will start on April 1st, according to a statement made by President Thomas Hodgson. The factory will be constructed of steel and concrete, and Mr. Hodgson himself will supervise its erection.

It is reported that Horne Bros., William St., are having plans prepared for woollen mills.

London.

*The Parnell-Dean Steam Baking Co., Limited, repeat their statement of last month that, owing to the war, they are not going to do anything in the way of construction for the present.

The Middlesex Mills, Ltd., incorporated a few months ago with a capital stock of \$80,000, started manufacturing operations on February 10 in a plant at Pall Mall and Colborne Streets. Turkish towels and crash are manufactured, the equipment of 46 looms, and 4 sewing machines being operated by steam and electric power. Albert Mitchell is president, agent, superintendent and buyer.

The A. A. Langford Co. will erect a \$40,000 factory and salesroom at the corner of Clarence and King Streets.

Markham.

The Hall Motor Co., of which E. A. Hall is manager, are said to have secured a plant here which will be equipped for the manufacture of motor trucks.

Merritton.

An electrolytic bleaching plant to bleach their present unbleached tonnage of thirty tons per day is being installed by the Riordon Pulp & Paper Co., and will be ready about June 1.

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asset to the Traveller.”

Particulars from Canadian Pacific Ticket Agent, or write
W. B. HOWARD, D.P.A., Toronto

New Toronto.

*A new brass rod mill is in process of erection by Brown's Copper and Brass Rolling Mills, Limited. The new mill on completion will turn out brass rods and shapes made by the "Extrusion Process," which is the latest method of furnishing brass rods and shapes, superseding the old method of furnishing cold drawn brass rods. The new undertaking will cost in the neighborhood of \$125,000 and is to take care of increasing business. The management explain, however, that their main object is to prepare to take care of future business. They are not basing their figures on war-time requirements but would in any case increase their capacity to handle domestic requirements, which they believe will be very large after the war is over.

Niagara Falls.

*The Oneida Community, Limited, Oneida, N.Y., are making plans to manufacture their various lines of silver-plated ware in Canada. They intend to use temporarily a remodeled building, but as yet it is uncertain just when the new plant will be opened. From the present outlook, they expect to begin supplying the trade with Canadian-made goods some time during the month of June.

The plant of the old Dominion Safe & Vault Co. at Farnham, P.Q., will be moved to Niagara Falls, Ont., by the Pollard Mfg. Co., where it will be utilized in the manufacture of "Midget" flour mills. The Pollard Co. is associated with the Canadian Fairbanks-Morse Co. in their enterprise, the latter company having undertaken to act as selling agents for these miniature flour mills. It is understood that contracts have already been closed sufficient to keep a force of men at work for a year.

Oakville.

A plant for the manufacture of boxes required in the fruit-growing industry will be established by Wallace, Chapman & Marshall.

Ottawa.

Fire completely destroyed the manufacturing establishment of the Grant, Holden and Graham Co., Limited on Albert Street, last month. Estimated loss, \$20,000.

The Ottawa Brass Mfg. Co. is considering the erection of an addition to its factory.

Peterborough.

*The Bonner-Worth Co., Limited, worsted yarn spinners, have decided to add another 75 per cent. to the present capacity of their buildings in order to take care of increased contracts for yarns. The contract has been let for the new building, and construction will probably commence in April. Machinery is on order for May delivery, and it is hoped to have everything in full running order by July 1.

St. Catharines.

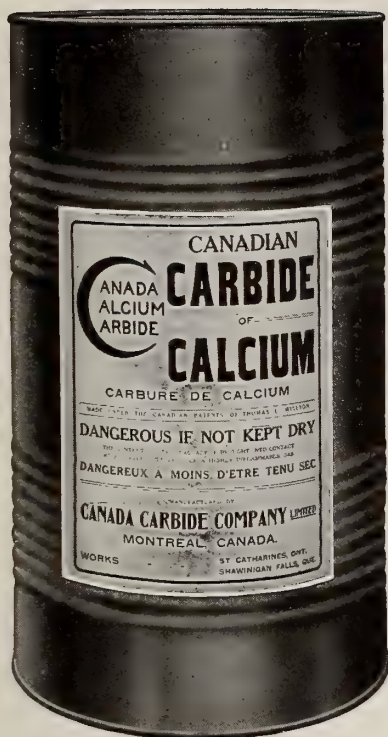
A company is being organized here for the purpose of acquiring the rights to manufacture and sell Globe tires in Canada. The concern will be called the Globe Tire Co. of Canada, and will manufacture automobile, electric and commercial tires.

It is reported that the Metal Drawing Co. will build an extension to their factory.

A plant is being established here by a group of manufacturers from Wheeling, W. Virginia, for the manufacture of a general line of chemicals, more particularly potash, the latter to be made from wood ashes, though later on feldspar from near Kingston may be used. The company has been incorporated as Chemical Refinery, Limited.

St. Marys.

The St. Marys Cement Co. are installing a third kiln in their plant, which will largely increase the output and number of men employed. Over sixty of the old employees have joined the colors since the beginning of the war, whose places are taken by new workmen.



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Catalogue B.



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GODERICH, CANADA

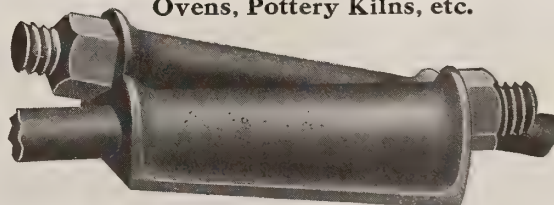


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Automatic Fire Sprinkler System

throughout your Factory, Store or Ware-
house.



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St. Thomas.

The St. Thomas Pure Milk Co. propose erecting a new plant at an approximate cost of \$10,000.

Sarnia.

*The report that Lockwood, Greene & Co., Boston, would erect a cotton mill in Sarnia is denied by that company, who state that "there is absolutely no truth in this rumor at the present time."

*With regard to the proposed erection of a flax scutching plant here, in which the Board of Trade has been interesting itself, T. A. Gordon, secretary of the Board, informs INDUSTRIAL CANADA that the matter rests entirely with the farmers. If they are prepared to stay with the mill and guarantee a crop for a few years to come, the proposition will be carried through. Should the plant be established the idea is to have all the suggested improvements placed in the mill that are recommended by the Canadian Flax Growers Association.

The Imperial Oil Co. are reported to be about to make an addition to their machine shop here and to build ten new pressure stills.

*The Sarnia Creamery Company, Limited, have added another story to their plant and are now pasteurizing and ripening all their milk and cream on the upper floor and carrying it by gravity to the churns, ice-cream freezers and milk bottles on the ground floor. They are also installing a refrigerating machine and installing cold storage rooms.

Sault Ste. Marie.

The Algoma Steel Corporation are reported as having completed arrangements for the manufacture of munitions in their Soo plant. A contract has been awarded the McPhail and Wright Construction Company for the erection of a new building on the site which was formerly the company's saw mill. The new structure, which will be 350 feet long by 120 feet wide, will cost fifty thousand dollars and the contract calls for the completion of the work in thirty days.

Smooth Rock Falls.

A. G. McIntyre, formerly manager of the Bathurst Lumber Co., is in charge of the construction of a power dam and a 75-ton bleached sulphite mill to be built here by the Mattagami Pulp & Paper Co., Limited, a new four million dollar company with headquarters in Toronto. The company has a thousand acres of spruce limits and three waterfalls. They expect to have their mill in operation by June 1, 1917.

Stratford.

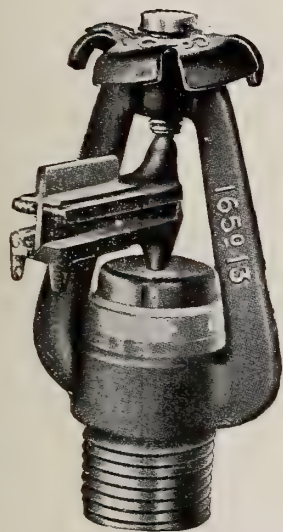
*Avon Hosiery, Limited, manufacturers of various lines of knitted goods, propose to erect an addition to their factory. The extension will be about 40 x 60 feet, three storeys and basement, and fitted with an elevator. It is not the intention to add any new lines to the company's product, but the enlarged space will be utilized in developing lines already under manufacture.

It is reported that the George McLagan Furniture Co. will enlarge their factory, the work of construction starting in the spring. Plans call for a four-storey structure, 160 x 60 feet.

The R. M. Ballantyne Co. are reported to be about to make an addition to their power plant.

A factory for the manufacture of corrugated iron will be built here by A. J. Bates of the McConkey-Bates Co.

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A Century Our**

"A" and "AA" DUCKS

have been Favorites

with Manufacturers of Women's and Children's Summer garments. That they have given complete satisfaction is proven by their growing popularity.

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Dominion Textile Co.

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Operating Twelve Mills;
Employing Ten Thousand People.

Manufacturing White and Grey Cottons, Prints, Sheetings, Shirtings, Pillow Cottons, Longcloths, Cambrics, Ducks, Bags, Twills, Drills, Quilts, Bureau Covers, Towels and Towelling, Blankets, Rugs, Twines and many other lines used by Manufacturers in Rubber and other Trades.

Sudbury.

*The Sudbury Construction and Machinery Co., Limited, are making important additions to their plant. A new cupola house, 30 x 40 feet, is being erected, in which a new and much larger cupola furnace is to be installed, giving the company a capacity of 150 tons of castings a month. An addition, 30 x 40 feet, is being made to the present foundry which will be devoted entirely to the casting of brass. A cleaning house is also being erected where all castings will be finally finished and prepared for shipment, thus leaving the foundries clear for their special work. The extensions are of brick and steel construction and will increase the capacity of the plant by fifty per cent. The company was established in 1909 by local capital and has made good progress, supplying considerable material to the mining companies of New Ontario.

Thorold.

*The new sulphite pulp mill to be erected this year by the Ontario Paper Co., Limited, will have a capacity of fifty tons per day and will be ready for operation about November.

Toronto.

*The W. K. Kellogg Cereal Co. are proceeding with the erection and equipment of a modern plant, for the manufacture of their various food products, in the new Central Industrial Section (the name given to the old Central Prison property recently acquired by the G.T.R. for the development of an up-to-date factory district). The establishment of this Canadian plant is the result of less than two years' efforts in the marketing of the W. K. Kellogg cereals in Canada. It will be ready for operation about May 1 and will have an initial capacity of 1,000 cases a day and a payroll of about 200 hands. Canadian wheat and other materials and Canadian labor will be used exclusively, and it is the intention to develop an export business to European countries.

*The Martin Corrugated Paper Box Co., whose plant was seriously damaged by a fire on Christmas Eve, have been restoring their factory in sections and will soon have the entire premises complete. The old building is being considerably enlarged and the factory made modern in every respect.

A permit for a brick addition to their factory, worth \$11,300, has been issued to the Sheet Metal Products Co., 228 Oak Street.

Press reports are to the effect that the Gutta Percha & Rubber Company intend to make an addition to their factory on West Lodge Ave.

The Hamilton Gear and Machine Co. are making an addition to their plant at a reputed cost of \$5,000.

*The Hare Engineering Company, Limited, builders of rolling mill machinery, steel heating furnaces and mechanical stokers, are moving from 115 King St. East to 99-101 King St. West, where enlarged facilities for their business have been secured.

The Laura Secord Candy Co. have been granted a permit for the erection of a four-storey brick building for use as a factory at 64 Princess Street. The estimated cost is \$9,000.

*The Ideal Bedding Co., Limited, referring to the fire which took place last month in their mattress department, report that the damage done was principally by water and affected stock on hand and machinery more than the building itself. When the burned and otherwise damaged cotton and other materials were cleared away and machinery overhauled, it was possible to resume operations at once, and the plant is now running almost up to full capacity.



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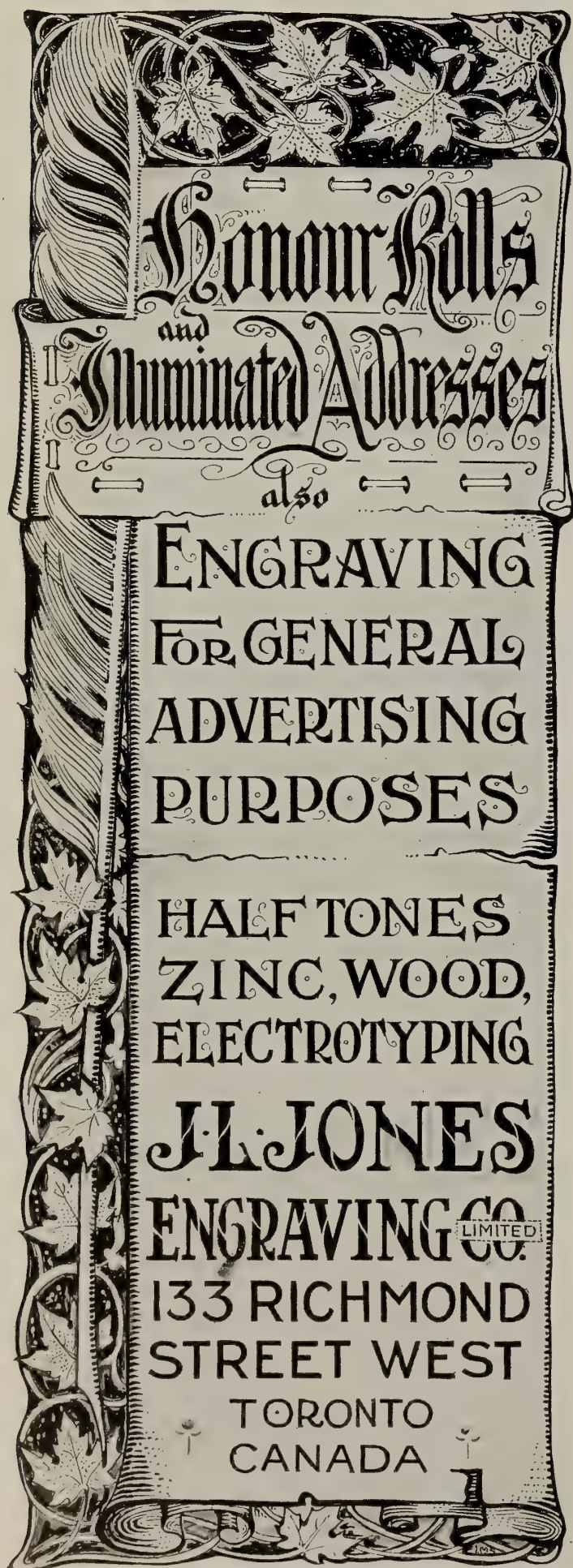
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**HALF TONES
ZINC, WOOD,
ELECTROTYPING**

J. L. JONES
ENGRAVING CO. LIMITED
**133 RICHMOND
STREET WEST**
**TORONTO
CANADA**

*The National Equipment Company, Limited, makers of gasoline engines, hot air engines, electric pumps and self-measuring oil storage systems, are putting up a new tank shop to take care of a large increase in the demand for both pneumatic and oil storage tanks. Considerable new machinery is also being installed.

*The Toronto Laundry Machine Co., Limited, have added an extra storey to one of the buildings of their plant for shipping purposes.

The Canada Metal Co. have been granted a permit for the erection of a shot-tower to cost about \$4,000.

The Gold Medal Furniture Co. will rebuild that part of their plant which was recently destroyed by fire.

The Universal Tool Steel Co. are constructing a one-storey brick addition to their plant on Dufferin Street.

The Canada Pipe & Steel Co. will build an addition to its machine shop to cost \$3,000.

The Ontario Metal Products Co. have taken over the building which extends back from 50 Pearl Street to Adelaide Street. It is the intention to enlarge same with a view to further business development.

The Smith Manufacturing Co., shoddy manufacturers, are adding another storey to their building, to allow more storage and wareroom space.

The Dunlop Tire & Rubber Goods Co. have received a permit for an addition to their factory on Booth Ave.

Welland.

*The Canadian Steel Foundries, Limited, are reopening their rolling mill department, which has been inactive for the past two years. They have sufficient orders booked to keep the plant running to capacity, viz., 300 tons per day, until well into next year. Between 300 and 400 men will be employed.

It has been announced that a big branch factory of the Chalmers Motor Co. of Detroit will be built either here or in Walkerville. This follows the recent organization of the Chalmers Motor Co. of Canada, which was incorporated with a million dollars capital.

Windsor.

*The Remington U.M.C. Cartridge Works located here is one of several units, which have been amalgamated into one corporate company under the name of the Remington Arms Union Metallic Cartridge Company, incorporated under the laws of the State of Connecticut. The other concerns included in the amalgamation are the Remington Arms Works, Ilion, N.Y.; the Remington Arms and Ammunition Works and the U. M. C. Cartridge Works, Bridgeport, Conn.; the Remington U.M.C. Cartridge Works, Brimsdown, England, and the plant formerly operated by the Robin Hood Ammunition Co., Swanton, Vermont. The capital stock is \$60,000,000 divided into 1,200,000 shares with a par value of \$50 each. Of this, \$20,000,000 is preferred stock paying cumulative dividends of 7 per cent. and \$40,000,000 is common stock. The new corporation will continue to operate all of the above-named plants. The officers of the company are: M. H. Dodge, president; S. F. Pryor, first vice-president; C. L. Reiersen, vice-president; C. C. Tylor, vice-president; I. S. Betts, vice-president; George Bingham, secretary and treasurer. The general offices of the company will continue to occupy the 26th floor of the Woolworth Building, No. 223 Broadway, New York City.

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Riordan Paper Company, Limited
MONTREAL ·· CANADA

*Building operations for the Canadian plant of the Maxwell Motor Company will start immediately. The first building will be of the "saw tooth" variety, 300 x 100 feet, of concrete construction and equipped with machinery of the most modern type. The company has acquired seven acres of ground to admit of future extensions, and the City of Windsor has granted tax exemptions and free water for ten years. The plant, as now planned, will cost \$65,000 and have a capacity of 30 cars daily.

It is reported that the Universal Stove and Furnace Co. are contemplating the erection here of a plant for the manufacture of stoves, furnaces, etc. Plans are being prepared by A. R. Bartlet, of this town, for the erection of a factory at Windsor or Walkerville, Ont., for the Chalmers Motor Co., Detroit, Mich., to cost \$65,000.

Woodbridge.

Edwards & Co., Toronto, have leased the old American Abel Co., factory here and will use it for the manufacture of leather goods.

QUEBEC.

Cap Madeleine.

The St. Maurice Paper Co. will build a large paper mill here, and have given the contract to the Geo. A. Fuller Co., Montreal.

Coaticook.

*The Belding Paul Corticelli, Limited, are making to their present mill buildings here an addition, 65 x 50 feet, solid brick, three storeys and basement.

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Leather Goods, Diaries, Paper,
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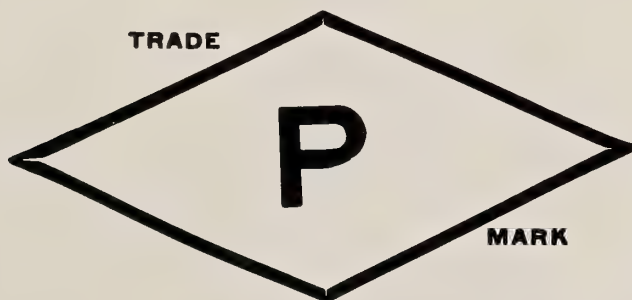
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ST. JOHN, N.B., CANADA

EUROPEAN AGENTS :

KELLNER PARTINGTON PULP AND PAPER CO.

MANCHESTER, ENGLAND

Granby.

Fire has badly damaged the factory of R. B. McComiskey & Co.

Montmorency Falls.

The report is made in Quebec that the Dominion Textile Company which already has two large mills at Montmorency Falls, will shortly erect another large plant close to the Riverside Mill. The two plants already in existence have been working night and day for some months past, but it is understood that the lines to be manufactured in the proposed new plant will be different from those now turned out at the existing plants.

Montreal.

*Fire did \$9,500 damage to the forge department of the Turcot Works of the Canadian Car & Foundry Co., Limited, on February 12. The damage was not nearly as serious as newspaper reports represented it to be. The plant was repaired sufficiently to resume operations within a few days, and concluding repairs were completed by the end of the month.

*Brandram-Henderson, Limited, manufacturers of paints, dry colors, varnishes, lead products, etc., are fitting out new offices in place of the old ones and are also installing an improved first-class laboratory. The offices are finished in chestnut panelling and the laboratory is tiled throughout.

The Canadian Architectural Iron Works, Bellechasse St., were totally destroyed by fire last month.

Plans are being prepared, it is said, by the Northern Electric Co., for the erection of a new factory building.

The Steel Co. of Canada will build an addition to its plant here to cost \$24,000.

Quebec.

The factory on Desprairies Street, owned by the G. A. Vandry Biscuit Co., has been badly gutted by fire, causing a loss of \$42,000.

Rock Island.

Work has been started on the erection of a factory here for G. & G. Ltd., Stanstead. The general contract has been let to Loomis, Dakin, Ltd., St. Gabriel Street, Sherbrooke. Metal siding construction, concrete foundation, felt and gravel roofing. Approximate cost, \$15,000.

St. Jerome.

The St. Jerome Manufacturing Company, Ltd., will call for tenders in the early spring for the erection of an addition to their factory. Stone, brick or cement block construction.

Shawinigan Falls.

The new 202-inch paper machine of the Belgo-Canadian Pulp & Paper Co. is now being installed and will be in operation about the end of March. This will increase the company's output of newsprint to 185 tons daily. In all probability an extension will be made to the sulphite pulp mill during the summer, increasing the capacity of the plant by 30 tons per day.

Sherbrooke.

*Walter Blue & Company, Limited, clothing manufacturers, have recently made an addition to their factory of a solid brick, fireproof construction building, 50 x 100 feet, two storeys and basement. The basement will be used for the installation of the latest hydraulic press and cold water sponging plant, the first floor for additional cutting room, and the second floor for surplus stock.

The Montreal Lithographing Company, Limited

High Class Lithographers and Designers of

CALENDARS

SHOW CARDS

LABELS

OFFICE STATIONERY

ADVERTISING PLAYING CARDS

Office and Works

ONTARIO STREET & PAPINEAU AVENUE
MONTREAL, CANADA

Three Rivers.

The Constant, Monette & Pion Co., Montreal, are said to be building a chemical factory at Three Rivers.

It is said that the Canada Iron Corporation will make an addition to their plant.

SASKATCHEWAN.**Saskatoon.**

A concern known as the Sand & Gravel Deposits Ltd., has been incorporated with the object of making concrete chimneys, fence posts, window sills, etc. E. E. McEown is interested in the proposition.

A CLASSIFIED LIST OF CHEMISTS.

It is the intention of the Society of Chemical Industry to publish in the near future a classified list of chemists, chemical engineers and others engaged in any profession or pursuit in which chemistry is involved. The purpose of the list will be to provide information, which will be available by the Government or anyone else wishing to avail themselves of the services of those capable of undertaking specialized work. When the list is complete it will give an accurate idea of the possible chemical resources of the Dominion, and will be a valuable work of reference for all engaged in chemical science and industry. A circular letter with enclosed card for the tabulation of information has been sent out by the Society with the request that requisite data be furnished promptly. Alfred Burton, 2 Liberty Street, Toronto, is the honorary secretary.



By Royal Warrant

“Canadian Club” Whisky

Fully Ripened in Wood. Age Guaranteed by Government.

QUALITY UNEXCELLED

Distilled and Bottled by

HIRAM WALKER & SONS
LIMITED

Walkerville, Canada

LONDON
MEXICO CITY

CHICAGO
VICTORIA, B.C.

NEW YORK
WINNIPEG

BUYERS' GUIDE TO CANADIAN MANUFACTURES

A List of Articles Which Will Enable the Purchaser to Know the Manufacturers of Made-in-Canada Goods. For Rates for Insertion in this Department Write to the Advertising Manager of Industrial Canada, Toronto.

ABRASIVE MATERIALS

- *Canadian Hart Wheels, Ltd., Hamilton, Ont.
- *Dominion Abrasive Wheel Co., New Toronto, Ont.

ACCOUNT BOOKS

- *The Brown Bros., Ltd., Toronto.

ACCOUNTING FORMS

- Business Systems, Ltd., Toronto.

ACETYLENE GAS BURNERS

- Economic Acetylene Burner Co., Toronto.

ACIDS

- *The Grasselli Chemical Co., Ltd., Toronto.
- *The Nichols Chemical Co., Ltd., Montreal.

ADJUSTARODS

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ADVERTISING NOVELTIES

- Lawson & Jones, Ltd., London, Ont.

AERATED BEVERAGES

- Charles Gurd & Co., Ltd., Montreal, Que.
- J. J. McLaughlin, Ltd., Toronto.

ALCOHOL

- The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.
- *Hiram Walker & Sons, Limited, Walkerville, Ont.

ALE

- E. L. Drewry, Winnipeg, Man.

ALUMINUM

- *Northern Aluminum Co., Ltd., 1305 Traders Bank, Toronto.

ALUMINUM CASTINGS

- *Tallman Brass & Metal Co., Hamilton, Ont.

AMMONIA

- Canadian Ammonia Co., Ltd., Toronto.

ANGLE BARS

- *The Steel Company of Canada, Limited, Hamilton, Ont.

ARC AND INCANDESCENT HEADLIGHTS (Electric)

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

ASBESTOS:

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEATHING:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS SHEET AND PISTON PACKINGS

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS STEAM PIPE AND BOILER COVERINGS

- *Eureka Mineral Wool & Asbestos Co., Toronto.

ASBESTOS TEXTILES:

- *Canadian H. W. Johns-Manville Co., Toronto.
- *Eureka Mineral Wool & Asbestos Co., Toronto.

ATHLETIC UNDERWEAR

- Williams, Green & Rome Co., Ltd., Berlin, Ont.

AUTOMOBILE ACCESSORIES,

- *Northern Electric Co., Limited, Montreal.
- *Tallman Brass & Metal Co., Hamilton, Ont.

AUTOMOBILE PARTS

- *Dominion Forge & Stamping Co., Walkerville, Ont.

AWNING CORD (cotton)

- Hamilton Cotton Co., Hamilton, Ont.

AXLES

- Canada Forge Co., Ltd., Welland, Ont.
- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

AXLES, carriage and automobile

- Guelph Spring & Axle Co., Ltd., Guelph, Ont.

BABBITT METAL

- Alonzo W. Spooner, Limited, Port Hope, Ont.
- *The Canada Metal Co., Toronto.
- *Tallman Brass & Metal Co., Hamilton, Ont.

BACON

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BAGS

- *Scythes & Co., Ltd., Toronto.

BAGS, Cotton

- The Canadian Bag Co., Ltd., Montreal, Que.

BAGS, jute

- The Canadian Bag Co., Ltd., Montreal, Que.

BAGS, travelling

- J. Eveleigh & Co., Ltd., Montreal, Que.
- Lamontagne, Ltd., Montreal, Que.
- The M. Langmuir Mfg. Co., of Toronto, Ltd., Toronto.

BAKING JAPAN

- *Berry Bros., Ltd., Winnipeg, Man.

BAND RESAWS:

- *Berlin Machine Works, Ltd., Hamilton, Ont.

BANK AND OFFICE RAILINGS

- *The Geo. B. Meadows, Toronto, Wire, Iron & Brass Works Co., Ltd., Toronto.
- *Canada Wire and Iron Works, Hamilton, Ont.

BANK FITTINGS

- The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

BANK RAILINGS and CAGES

- *Canada Wire and Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London.

BANK SIGNS AND FITTINGS

- *Tallman Brass & Metal Co., Hamilton, Ont.

BARs, iron

- London Rolling Mill Co., Limited, London, Ont.

BARs, steel

- London Rolling Mill Co., Limited, London, Ont.

BASEBALL GOODS

- A. J. Reach Co., Brantford, Ont.

BATHS, enamelled

- Amherst Foundry Co., Ltd., Amherst, N.S.

BATTERIES, dry

- The Canadian National Carbon Co., Ltd., Toronto.
- Canadian Carbon Company, Ltd., Toronto.

BEARINGS

- *The Chapman Double Ball Bearing Co., Ltd., Toronto.
- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS, bronze

- *Tallman Brass & Metal Co., Hamilton, Ont.

BEARINGS, pillow block and upright

- *Dodge Mfg. Co., Ltd., Toronto.
- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEARINGS

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BEDS, camp folding

- *Otterville Mfg. Co., Ltd., Otterville, Ont.

BEEF

- E. W. Fearman Co., Ltd., Hamilton, Ont.

BEER

- E. L. Drewry, Winnipeg, Man.

BELTING, chain conveyors

- *Canadian Link Belt Co., Toronto.

BELTING, chains

- *Dodge Mfg. Co., Ltd., Toronto.
- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BELTING, Elevator

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.

BELTING, leather

- The Beardmore Belting Co., Ltd., Toronto.
- *J. L. Goodhue & Co., Danville, P.Q.
- *Sadler & Howarth, Montreal.
- *The D. K. McLaren Belting Co., Ltd., Montreal.
- *The J. C. McLaren Belting Co., Ltd., Montreal.

BELTING, rubber

- *Canadian Consolidated Rubber Co., Ltd., Montreal, Que.
- Dunlop Tire & Rubber Goods Co., Ltd., Toronto.
- *Gutta Percha & Rubber, Limited, Toronto.

BENT GOODS

- The Crown Lumber Co., Woodstock, Ont.

BICYCLES AND ACCESSORIES

- *Canada Cycle and Motor Co., Ltd., Toronto.

BINDERS, loose leaf

- Business Systems, Ltd., Toronto.

BISCUITS

- The Montreal Biscuit Co., Montreal, Que.

BLACK SHEETS

- *A. C. Leslie & Co., Montreal.

BLANK BOOKS

- Business Systems, Ltd., Toronto.

BLANKETS

- Slingsby Mfg. Co., Ltd., Brantford, Ont.
- J. Walsham & Son, Ltd., Bolton, Ont.

BLANKETS, horse

- Slingsby Mfg. Co., Ltd., Brantford, Ont.
- J. Walsham & Son, Limited, Bolton, Ont.

BLASTING ACCESSORIES

- Canadian Explosives, Ltd., Montreal, Que.

BLEACHING POWDER

- Canadian Salt Co., Ltd., Windsor, Ont.

BLOWERS

- *Sheldons, Ltd., Galt, Ont.

BOATS OF ALL KINDS

- Peterboro Canoe Co., Ltd., Peterboro, Ont.

BOILER COMPOUND and OILS

- *Canadian H. W. Johns-Manville Co., Toronto.
- Electric Boiler Compound Co., Ltd., Guelph, Ont.

BOILERS

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Darling Bros., Montreal.
- *Goldie & McCulloch Co., Limited, Galt, Ont.
- John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.
- *Polson Iron Works, Ltd., Toronto.
- J. & R. Weir, Montreal, Que.
- Taylor-Forbes Co., Ltd., Guelph, Ont.
- *Jenckes Machine Co., Sherbrooke, Que.
- *The Waterous Engine Works Co., Ltd., Brantford.

BOILERS, heating

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

BOILERS, hot water or steam

- Warden King, Ltd., Montreal, Que.

BOILERS, steam.

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.
- Steel and Radiation Ltd., Toronto.
- Warden King, Ltd., Montreal, Que.
- *The Waterous Engine Works Co., Ltd., Brantford, Ont.

BOILERS, steam and brass work

- *The Waterous Engine Works Co., Ltd., Brantford, Ont.

BOILER FEED PUMPS

- *The Bawden Machine Co., Limited, Toronto.

BOILER STANDS

- Anthes Foundry Ltd., Toronto.

BOLSTERS

- *Canadian Car & Foundry Co., Ltd., Montreal, Que.

BOLTS

- *The National Acme Mfg Co., Montreal, Que.

BOLTS AND NUTS

- *The Canadian Tube & Iron Co., Ltd., Montreal, Que.
- *The Steel Company of Canada, Limited, Hamilton, Ont.
- Starr Mfg. Co., Ltd., Dartmouth, N.S.

BOOKBINDERS

- R. G. McLean, Toronto.
- *The Brown Bros., Ltd., Toronto.

BOOKCASES, sectional (Gunn)

- The George McLagan Furniture Co., Ltd., Stratford, Ont.

BOOKLETS

- Stone Limited, Toronto.
- R. G. McLean, Toronto.

BOOKS, blank

- *The Brown Bros., Ltd., Toronto.

BOOTS AND SHOES

- Ames-Holden-McCreedy, Ltd., Montreal, Que.
- J. Leckie Co., Ltd.
- The John Ritchie Co., Ltd., Quebec, Que.

BOXES, cellular board:

- *The Thompson & Norris Co. of Canada, Ltd., Niagara Falls.

BOXES, rattle and soap

- The Arlington Co. of Canada, Ltd., Toronto.

BOXES AND SHOOKS, wooden

- The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

BOXES, wooden

- G. & J. Esplen, Montreal, Que.
- Barchard & Co., Ltd., Toronto.

BRAIDS AND TRIMMINGS

- The Moulton Mfg. Co., Limited, Montreal.

BRAKE SHOES

- *Canadian Hart Wheels, Limited, Hamilton, Ont.

BRANDS, burning

- Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS BOLTS AND NUTS

- *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS, BRONZE and ALUMINUM LETTERS

- *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS ENGRAVERS

- Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS FOUNDERS AND FINISHERS

- *The Booth-Coulter Copper & Brass Co., Ltd., Toronto.
- *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS GOODS

*The Booth-Coulter Copper & Brass Co., Ltd., Toronto.
 *Mueller Mfg. Co., Sarnia.
 The Garth Co., Montreal, Que.
 The James Morrison Brass Mfg. Co., Ltd., Toronto.
 *The Kerr Engine Co., Ltd., Walkerville, Ont.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS PLATES

Geo. Booth & Son., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS RODS, SHEETS AND PLATES

*Brown's Copper and Brass Rolling Mills, Ltd., New Toronto.

BRASS SIGNS AND MEMORIALS

*Tallman Brass & Metal Co., Hamilton, Ont.

BRASS TUBING, seamless

Canadian Seamless Wire Co., Ltd., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS WIRE

Canadian Seamless Wire Co., Ltd., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.

BRASS WORK, church

Pritchard, Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

BRASS WORK, special

Bawden Machine Co., Ltd., Toronto.
 *Tallman Brass & Metal Co., Hamilton, Ont.
 *Booth-Coulter Copper & Brass Co., Ltd., Toronto.
 *The Waterson Engine Works Co., Ltd., Brantford, Ont.

BRICK

National Brick Co. of Laprairie, Laprairie, P.Q.
 Port Credit Brick Co., Port Credit, Ont.

BRICK, enamel

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, pressed

National Brick Co. of Laprairie, Laprairie, P.Q.

BRICK, rubbing

*Canadian Hart Wheels, Limited, Hamilton, Ont.

BRICK, sewer

National Brick Co. of Laprairie, Laprairie, P.Q.

BRIDGES, Railway and Highway

*Dominion Bridge Co., Montreal.
 *Hamilton Bridge Works Co., Ltd., Walkerville, Ont.
 *The Canadian Bridge Co., Ltd., Hamilton, Ont.
 *The Structural Steel Co., Limited, Montreal, Que.

BRINE PUMPS

*The Bawden Machine Co., Ltd., Toronto.

BROOMS

Simms, T. S., & Co., Limited, St. John, N.B.
 Stevens-Hepner Co., Limited, Port Elgin, Ont.
 *Boeckh Bros. Co., Toronto.

BRUSHES

*Boeckh Bros. Co., Toronto.
 Simms, T. S., & Co., Limited, St. John, N.B.
 Stevens-Hepner Co., Limited, Port Elgin, Ont.

BRUSHES, carbon

Canadian National Carbon Co., Ltd., Toronto.

BUCKET TANKS

*The General Fire Equipment Co., Limited, Toronto, Ont.

BUCKLES, shoe and coat

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

BUILDING

Bathurst Lumber Co. Ltd., Bathurst, N.B.

BUILDING BLOCKS, vitrified, salt glazed

Standard Clay Products, Ltd., St. Johns, Que.

BUILDING FELT and PAPER

*Canadian H. W. Johns-Manville Co., Toronto.
 *Eureka Mineral Wool & Asbestos Co., Toronto.
 *Paterson Manufacturing Company, Toronto and Montreal.

BUILDERS, ship

*Polson Iron Works, Limited, Toronto.
 J. & R. Weir, Montreal, Que.

BURLAPS

The Canadian Bag Co., Limited, Montreal, Que.
 *Scythes & Co., Ltd., Toronto.

BURLAPS, decorative

Dominion Oil Cloth Co., Limited, Montreal, Que.

CABINETS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CABLE, Copper and galvanized

*The Steel Co. of Canada, Ltd., Hamilton, Ont.

CABLES, transmission and telephones

*Eugene F. Phillips Electrical Works, Ltd., Montreal, Que.

CABLES, Transmission and Cable

*Northern Electric Co., Limited, Montreal, Que.

CABLES, wire

The Dominion Wire Rope Co., Ltd., Montreal, Que.
 *The B. Greening Wire Co., Ltd., Hamilton, Ont.

CALENDARS, ADVERTISING

NOVELTIES, etc.
 Rolph & Clark, Limited, Toronto.
 Lawson & Jones, Limited, London, Ont.
 Stone Limited, Toronto.

CAMERAS

Canadian Kodak Co., Limited, Toronto.

CAMPERS' OUTFITTERS

Slingsby Mfg. Co., Ltd., Brantford, Ont.

CANOEES

Peterboro Canoe Co., Ltd., Peterboro, Ont.

CANS, baking powder, etc.

American Can Co., Montreal and Hamilton.
 A. R. Whittall, Montreal, Que.

CANS, fruit

American Can Co., Montreal and Hamilton.
 A. R. Whittall, Montreal, Que.

CANS, tin

A. R. Whittall, Montreal, Que.
 American Can Co., Montreal and Hamilton.

CANS, iron, lead and putty

A. R. Whittall, Montreal, Que.

CANVAS

*Scythes & Co., Ltd., Toronto.

CAPS, cloth

John W. Peck & Co., Ltd., Montreal, Que.

CARBIDE

*Canada Carbide Co., Ltd., Montreal, Que.

CARBON BRUSHES

Canadian Carbon Co., Limited, Toronto.

CARBON PRODUCTS

Canadian Carbon Co., Limited, Toronto.

CARBONS, arc light

Canadian Carbon Co., Limited, Toronto.
 The Canadian National Carbon Co., Ltd.

CARBONS, flame

Canadian Carbon Co., Limited, Toronto.

CARBONIC ACID GAS

Canadian Carbonate Company, Ltd., Montreal, Que.

CARBIDE OF CALCIUM

*Canada Carbide Co., Ltd., Montreal, Que.

CARDBOARD

Bathurst Lumber Co., Ltd., Bathurst, N.B.

CARPETS AND RUGS

Toronto Carpet Mfg. Co., Limited, Toronto.

CARPETS AND RUGS, Axminster

and ingrain
 Toronto Carpet Mfg. Co., Limited, Toronto.

CARPETS AND RUGS, Brussels

and Wilton
 Toronto Carpet Mfg. Co., Limited, Toronto.

CARPET YARNS, worsted and wool

Toronto Carpet Mfg. Co., Limited, Toronto.

CARRIAGES, baby, etc.

Canada Furniture Manufacturers, Ltd., Woodstock, Ont.

CARRIERS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

CARRIERS, box and barrel

Canadian Mathews Gravity Carrier Co., Limited, Toronto.

CARRIERS, brick

Canadian Mathews Gravity Carrier Co., Limited, Toronto.

*Richards-Wilcox Canadian Co., Ltd., London, Ont.

CARS

Canadian Car & Foundry Co., Ltd., Montreal, Que.
 *National Steel Car Co., Limited, Hamilton, Ont.

CARS, industrial

*Sheldons, Ltd., Galt.

CARTONS, lithographed

Harris Lithographing Co., Toronto.

CASTINGS

*Tallman Brass & Metal Co., Hamilton, Ont.

CASTINGS, aluminum

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

CASTINGS, brass

*Tallman Brass & Metal Co., Hamilton, Ont.

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

CASTINGS, brass and bronze

*Tallman Brass & Metal Co., Hamilton, Ont.

CASTINGS, grey iron

*Dodge Mfg. Co., Toronto.

*Canadian Car & Foundry Co., Ltd., Montreal, Que.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

CASTINGS, malleable iron

*Galt Malleable Iron Co., Ltd., Galt, Ont.

*Pratt & Letchworth Co., Brantford, Ont.

CASTINGS, steel

*Canadian Steel Foundries, Ltd., Montreal, Que.

*Dominion Steel Foundry Co., Ltd., Hamilton, Ont.

Hull Iron and Steel Foundry, Ltd., Hull, P.Q.

*Wm. Kennedy & Sons, Ltd., Owen Sound, Ont.

CATALOGUE MAKERS

Grip, Ltd., Toronto.

R. G. McLean, Toronto.

CAUSTIC SODA

Canadian Salt Co., Ltd., Windsor, Ont.

CEMENT GUNS

Steel and Radiation, Ltd., Toronto.

CHAIN, silent drive

*Canadian Link Belt Co., Toronto.

CHAIRS, assembly hall

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, folding

Stratford Mfg. Co., Ltd., Stratford, Ont.

CHAIRS, rattan and upholstered

Imperial Rattan Co., Ltd., Stratford, Ont.

CHEMICALS

*The Grasselli Chemical Co., Ltd., Toronto.

*The Nichols Chemical Co., Ltd., Montreal, Que.

CHEMICAL LABORATORY

APPARATUS
 The Geo. M. Hendry Co., Limited, Toronto.

CHICLETS AND CHEWING GUM

Canadian Chewing Gum Co., Ltd., Toronto.

CIGARS

Ed. Youngheart & Co., Limited, Montreal, Que.

CIGARETTES AND TOBACCO

Philip Morris & Co., Limited, Montreal, Que.

CIRCULAR CUTTERS, solid steel

The Peter Hay Knife Co., Limited, Galt, Ont.

CLAM SHELL BUCKETS

*M. Beatty & Sons, Ltd., Welland, Ont.

CLOCKS AND CLOCK MOVEMENTS

The Arthur Pequegnat Clock Co., Berlin, Ont.

CLOCKS, TIME

*International Time Recording Co. of Canada, Ltd., Toronto.

CLOCKS, WATCHMEN'S

*The General Fire Equipment Co., Limited, Toronto.

CLOSET SEATS

*Goderich Organ Co., Goderich, Ont.

CLOTHING

John W. Peck & Co., Ltd., Montreal, Que.

Mackenzie & Co., Ottawa, Ont.

CLOTHING, leather and sheepskin lined coats

*A. R. Clarke & Co., Ltd., Toronto.

CLOTHING, Mackinaw

The Carss Mackinaw Clothing Co., Ltd., Orillia, Ont.

CLOTHES LINES, cotton

Hamilton Cotton Co., Hamilton, Ont.

CLUTCHES

*Dodge Mfg. Co., Ltd., Toronto.

CLUTCHES, conveyors

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

COAL

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.
 Standard Fuel Co., Toronto.

COBALT OXIDE

The Coniagas Reduction Co., Ltd., St. Catharines, Ont.

COCOA AND CHOCOLATE PREPARATIONS

Walter Baker & Co., of Canada, Ltd., Montreal, Que.

COFFEE

S. H. Ewing & Sons, Montreal, Que.

COFFEE IMPORTERS, Roasters and Manufacturers

C. H. Cochrane & Co., Ottawa, Ont.

COLD DRAWN SHAPES, flats, squares and hexagons

*The Canadian Drawn Steel Co., Ltd., Hamilton, Ont.

*Union Drawn Steel Co., Limited, Hamilton, Ont.

COLD STORAGE DOORS

John Hillock & Co., Ltd., Toronto.

COLLAR BUTTONS

The Arlington Co. of Canada, Ltd., Toronto.

COLLARS

The Standard Shirt Co., Limited, Montreal, Que.

COLLARS, coated linen

Parsons & Parsons Canadian Co., Hamilton, Ont.

COLLARS AND CUFFS, waterproof

Williams, Greene & Rome, Berlin, Ont.

COLORS

Brandram-Henderson, Limited, Montreal, Que.

A. Ramsay & Son Co., Montreal, Que.

COMBS, fine dressing and name

The Arlington Co. of Canada, Ltd., Toronto.

COMMERCIAL STATIONERS

Rolph & Clark, Ltd., Toronto.

COMMERCIAL STATIONERY

*Brown Bros., Ltd., Toronto.

CONCENTRATORS

*Jenckes Machine Co., Sherbrooke, Que.

CONCRETE COATINGS, paints, etc.
 The Imperial Varnish & Color Co., Limited, Toronto.

CONDUITS FOR INTERIOR WIRING

*Conduits Company, Ltd., Toronto.

CONDULETS FOR ELECTRICAL INSTALLATIONS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

CONFECTIONERY

Ganong Bros., Ltd., St. Stephens, N.B.

Moirs, Limited, Halifax, N.S.

The Montreal Biscuit Co., Montreal, Que.

CONTRACTORS' PLANT

*M. Beatty & Sons, Ltd., Welland, Ont.

CONVEYORS

*Canadian Mathews Gravity Carrier Co., Toronto.

*Dodge Mfg. Co., Ltd., Toronto.

*Jenckes Machine Co., Sherbrooke, Que.

COPPER

*Eugene F. Phillips, Electrical Works, Limited, Montreal.

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

COPPER SHEETS AND PLATES

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

*Tallman Brass & Metal Co., Hamilton, Ont.

COPPERSMITHS

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

COPPER TUBING, seamless

Canadian Seamless Wire Co., Ltd., Toronto.

*Booth-Coulter Copper & Brass Co., Limited, Toronto.

COPPER WIRE

Canadian Seamless Wire Co., Ltd., Toronto.

CORKS

S. H. Ewing & Sons, Montreal, Que.

CORK CARPET

Dominion Oil Cloth Co., Ltd., Montreal, Que.

CORRUGATED BOXES

*Hinds & Dauch Paper Co., Toronto.

*Martin Corrugated Paper & Box Co., Limited, Toronto.

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORRUGATED PAPER

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

CORSETS

Dominion Corset Co., Quebec, Que.

COTTONS

*Dominion Textile Co., Limited, Montreal, Que.

*Montreal Cottons, Ltd., Valleyfield, P.Q.

COTTONADES

Hamilton Cotton Co., Hamilton, Ont.

COUPLERS

*Canadian Steel Foundries, Ltd., Welland, Ont.

CRANES

*Northern Crane Works, Walkerville, Ont.

CRANES, locomotive

*Canadian Link Belt Co., Toronto.

COUPLINGS

*Dodge Mfg. Co., Ltd., Toronto.

CRANKSHAFTS

Canada Forge Co., Ltd., Welland, Ont.

CREAM CHEESE, Ingersoll

The Ingersoll Packing Co., Limited, Ingersoll, Ont.

CREAM SEPARATORS AND MILK CLARIFIERS

De Laval Dairy Supply Co., Peterboro, Ont.

CREAMERY AND CHEESE FACTORY MACHINERY AND SUPPLIES

De Laval Dairy Supply Co., Ltd., Montreal, Que.

CREOSOTED MATERIALS

*Paterson Mfg. Co., Toronto and Montreal.

CRUSHED STONE

The Hagersville Contracting Co., Limited, Hagersville, Ont.

CRUSHING ROLLS

*Jenckes Machine Co., Sherbrooke, Que.

CUPOLAS

*Sheldons, Ltd., Galt, Ont.

*Northern Crane Works, Limited, Walkerville, Ont.

CUPS, presentation

Standard Silver Co., Toronto.

CUPS, grease and oil

*The Canadian Winkley Co., Ltd., Windsor, Ont.

CURLED HAIR

*Delany and Pettit, Ltd., Toronto.

CURTAINS, chenille

Hamilton Cotton Co., Hamilton, Ont.

CUTLERY

Standard Silver Co., Toronto.

Canadian Wm. A. Rogers, Ltd.

DENIMS

Hamilton Cotton Co., Hamilton, Ont.

DERAILS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

DESIGNERS

Ontario Engraving Co., Hamilton, Ont.

DESIGNERS and PRINTERS OF BOOKLETS, ETC.

Grip, Ltd., Toronto.

DINING ROOM SUITES

The George McLagan Furniture Co., Limited, Stratford, Ont.

DIES

*Butterfield & Co., Rock Island, P.Q.

DISINFECTING APPARATUS

Spramotor Co., London, Ont.

DOOR HANGERS

*Richards Wilcox Canadian Co., Ltd., London, Ont.

DRAPEY AND UPHOLSTERY GOODS

Daly & Morin, Montreal, Que.

DREDGES

*M. Beatty & Sons, Limited, Welland, Ont.

DRESSING, belt

Sadler & Haworth, Montreal, Que.

DRESS AND CLOAK TRIMMINGS

J. Henry Peters Co., 1 Mincing St., Toronto.

DRILLS

*John Morrow Screw & Nut Co., Limited, Ingersoll, Ont.

DRIFT BOLTS OR SPIKES

London Rolling Mill Co., Limited, London, Ont.

DROP FORGINGS

*Canadian Billings & Spencer, Ltd., Welland, Ont.

DRY CELLS, electric

Canadian Carbon Co., Limited, Toronto.

DRY COLORS

P. D. Dods & Co., Ltd., Montreal, Que.

The Imperial Varnish & Color Co., Limited, Toronto.

R. C. Jamieson & Co., Ltd., Montreal, Que.

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

DUMB WAITERS

Turnbull Elevator Mfg. Co., Toronto.

DURABLE WIRE ROPE

The Dominion Wire Rope Co., Ltd., Montreal, Que.

DYNAMITE

Canadian Explosives, Limited, Montreal, Que.

DYNAMOS

Consolidated Electric Co., Limited, Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*The Canadian Crocker-Wheeler Co., Limited, St. Catharines, Ont.

DYNAMOS, plating

*Jones & Moore Electric Co., Ltd., Toronto.

EIDERDOWN

Galt Knitting Co., Ltd., Galt.

ELECTRIC APPLIANCES

*Canadian Crocker-Wheeler Co., Limited, St. Catharines, Ont.

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

ELECTRICAL COMPOUNDS

Standard Paint Co. of Canada, Ltd., Montreal, Que.

ELECTRICAL AND GAS FIXTURES

The Garth Co., Montreal, Que.

The James Morrison Brass Mfg. Co., Limited, Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

ELECTRIC LAMPS

Packard Electric Co., Limited, Toronto.

ELECTRIC PLATE WARE

Roden Bros., Ltd., Toronto.

ELECTRIC BATTERIES

Canadian Carbon Co., Limited, Toronto.

ELECTROTYPING

Central Press Agency, Toronto.

ELECTRICAL SUPPLIES

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Northern Electric Co., Limited, Montreal, Que.

ELECTRO-SILVER PLATED WARE

Standard Silver Co., Toronto.

ELEVATING MACHINERY

*Canadian Mathews Gravity Carrier Co., Toronto.

ELEVATORS

*Jenckes Machine Co., Sherbrooke, Que.

Turnbull Elevator Manufacturing Company, Toronto.

*The Watrous Engine Works Co., Ltd., Brantford, Ont.

*Northern Crane Works, Limited, Walkerville, Ont.

ELEVATORS FOR ALL PURPOSES

*The Watrous Engine Works Co., Limited, Brantford, Ont.

ELEVATOR GATES AND DOORS

Turnbull Elevator Mfg. Co., Ltd., Toronto.

ELEVATOR GUARDS

*The Geo. B. Meadows, Toronto Iron and Brass Goods Works Co., Limited, Toronto.

*Canada Wire and Iron Works, Hamilton, Ont.

*ELEVATORS, hydraulic and electric John McDougall Caledonian Iron Works Co., Ltd., Montreal, Que.

*EMERY DRESSERS and STANDS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

*EMERY GRINDERS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

*EMERY WHEELS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

*EMERY WHEEL GUARDS

*Canadian Hart Wheels, Limited, Hamilton, Ont.

*EMERY WHEEL Safety Flanges

*Canadian Hart Wheels, Limited, Hamilton, Ont.

*ENAMELS

R. C. Jamieson & Co., Limited, Montreal, Que.

ENAMEL MANUFACTURERS AND DECORATORS

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

*ENAMEL AND TIN WARE

McClary Mfg. Co., London, Ont.

ENGINES

*E. Leonard & Sons, London, Ont.

*Goldie & McCulloch Co., Limited, Galt, Ont.

*J. & R. Weir, Montreal, Que.

*Polson Iron Works, Limited, Toronto.

*Sheldons, Ltd., Galt, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

*Massey-Harris Co., Ltd., Toronto.

*ENGINES, gasoline, tractor, plowing and threshing

*Sawyer-Massey Co., Ltd., Hamilton, Ont.

*ENGINES, hoisting

*M. Beatty & Sons, Welland, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

ENGINES, steam plowing and threshing

Sawyer-Massey Co., Limited, Hamilton, Ont.

ENGRAVERS

Grip, Limited, Toronto.

Ontario Engraving Co., Hamilton, Ont.

Rolph & Clark, Limited, Toronto.

Stone, Limited, Toronto.

ENGRAVERS, half-tone

Grip, Limited, Toronto.

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS, wood

Ontario Engraving Co., Hamilton, Ont.

ENGRAVERS AND PRINTERS steel plate

American Bank Note Co., Ottawa, Ont.

ENGRAVERS AND PRINTERS banknote

American Bank Note Co., Ottawa, Ont.

ENGRAVING

*J. L. Jones Engraving Company, Toronto.

ENGRAVING, copper and steel plate

Pritchard-Andrews Co. of Ottawa, Limited, Ottawa, Ont.

ENSILAGE AND STRAW CUTTERS

J. Fleury's Sons, Aurora, Ont.

ENVELOPES

Barber-Ellis Co., Ltd., Toronto.

Canada Envelope Co., Montreal, Que.

*ENVELOPES, Transos, Business Systems, Ltd., Toronto.

EXCELSIOR

*Delany & Pettit, Ltd., Toronto.

EXCELSIOR PADS

*Delany & Pettit, Ltd., Toronto.

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

EXPERTS IN PATENT CAUSES

Ridont & Maybee, Toronto.

EXPLOSIVES, high

Canadian Explosives Ltd., Montreal, Que.

FACE PLATE JAWS

Ker & Goodwin, Brantford, Ont.

FACTORY SUPPLIES, cheese and creamery

De Laval Dairy Supply Co., Ltd., Montreal, Que.

J. Henry Peters Co., 1 Mincing St., Toronto.

FANS

*Sheldons, Limited, Galt, Ont.

FASTENERS, belt

*Sadler & Haworth, Montreal, Que.

FELTS, PULP AND PAPER MAKERS

Ayers Limited, Lachute Mills, P.Q.

FENCES AND GATES

*Dennis Wire & Iron Works Co., London, Ont.

*Canada Wire and Iron Works, Hamilton, Ont.

FENCING AND GATES, woven wire

Banwell Hoxie Wire Fence Co., Hamilton, Ont.

*Canada Wire and Iron Goods Co., Hamilton, Ont.

FENCING, wire

C. H. Johnson & Sons, Limited, Montreal, Que.

FIBRE PAILS

*The E. B. Eddy Co., Ltd., Hull, Que.

FILES

Henry Disston & Sons, Limited, Toronto.

*The Nicholson File Co., Port Hope, Ont.

FIRE ALARMS

*Northern Electric Co., Limited, Montreal, Que.

FIRE DOOR HARDWARE

*Richards Wilcox Canadian Co., Limited, London, Ont.

FIRE ENGINES

*The Watrous Engine Works Co., Limited, Brantford, Ont.

FIRE ESCAPES

- *Canada Wire and Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London, Ont.

FIRE EXTINGUISHERS

- *Booth-Coulter Copper and Brass Co., Limited, Montreal, Que.
- *Canadian H. W. Johns-Manville Co., Toronto.
- *The General Fire Equipment Co., Limited, Toronto, Ont.

FIRE FIGHTING APPARATUS

- *The Waterous Engine Works Co., Limited, Brantford, Ont.

FIRE HOSE

- *Canadian Consolidated Rubber Co., of Canada, Limited, Montreal, Que.
- Dunlop Tire and Rubber Goods Co., Limited, Toronto.
- *Gutta Percha and Rubber, Ltd., Toronto.

FIRE PREVENTION MATERIAL

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- *Eureka Mineral Wool & Asbestos Co., Toronto.
- *The General Fire Equipment Co., Limited, Toronto.

FIRE-PROOF WINDOWS AND DOORS

- *Pedlar People, Ltd., Oshawa, Ont.

FIRE SPRINKLER SYSTEMS

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- *The General Fire Equipment Co., Limited, Toronto.
- *Purdy Mansell Co., Toronto.
- *H. G. Vogel Co., Montreal, Que.

FIRE AND WATER DEPARTMENT SUPPLIES

- *Chicago Bridge & Iron Works, Bridgeburg, Ont.
- The Garth Co., Montreal, Que.

FISH, Atlantic Sea-Foods

- Maritime Fish Corporation Ltd., Montreal, Que.

FITTINGS FOR SOIL PIPE

- Anthes Foundry, Ltd., Toronto.

FITTINGS, steam

- Warden King, Ltd., Montreal, Que.

FLAGS

- *Scythes & Co., Limited, Toronto.

FLASHLIGHTS

- Canadian Carbon Co., Toronto.

FLOORING, hardwood

- Seaman Kent Co., Ltd., Meaford, Ont.

FLUE LINERS

- Standard Clay Products, Ltd., St. Johns, Que.

FORGES

- *Sheldons, Limited, Galt, Ont.

FORGINGS

- Canada Forge Co., Ltd., Welland, Ont.
- *The Steel Co. of Canada, Limited, Hamilton, Ont.

FORGINGS, drop

- *Dominion Forge and Stamping Co., Walkerville, Ont.

FOUNDRY EQUIPMENT

- *Northern Crane Works, Limited, Walkerville, Ont.

FOUNTAIN FRUITS and Juices

- J. J. McLaughlin, Ltd., Toronto.

FRICTION CLUTCH PULLEYS

- *Dodge Mfg. Co., Ltd., Toronto.

FROGS AND CROSSINGS, manganese

- Canadian Ramapo Iron Works, Ltd., Niagara Falls, Ont.

FUEL

- Standard Fuel Co., Toronto.

FUR GARMENTS, men's and women's

- Holt, Renfrew, Ltd., Quebec.

FUR GOODS

- John W. Peck & Co., Limited, Montreal, Que.

FUR TRIMMINGS, ornaments and buttons

- J. Henry Peters Co., 1 Mincing St., Toronto.

FURNACES

- Gurney Foundry Co., Limited, Toronto.
- McClary Mfg. Co., London, Ont.
- The Jas. Smart Mfg. Co., Limited, Brockville, Ont.

FURNACES, hot air

- Bedford Stove Co., Bedford, Que.

FURNITURE, hall

- The George McLagan Furniture Co., Limited, Stratford, Ont.

FURNITURE, house and office

- Canada Furniture Mfrs., Limited, Woodstock, Ont.

FURNITURE, office

- The Canadian Office and School Furniture Co., Ltd., Preston, Ont.

FURNITURE, reed and rattan

- Imperial Rattan Co., Ltd., Stratford, Ont.

FUSE BOXES (Electric)

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

FUSES

- *Economy Fuse and Mfg. Co., Montreal.

GALVANIZED IRON

- *A. C. Leslie & Co., Montreal.

GALVANIZED SHEETS

- *Dominion Sheet Metal Co., Hamilton, Ont.

GALVANIZERS

- Acme Stamping & Tool Works, Ltd., Hamilton, Ont.
- *Ontario Wind Engine and Pump Co., Limited, Toronto.

GASOLINE ENGINES

- *Ontario Wind & Pump Co., Ltd., Toronto.
- De Laval Dairy Supply Co., Ltd., Peterboro, Ont.

GASOLINE FIRE ENGINES

- *The Waterous Engine Works Co., Limited, Brantford, Ont.

GASOLINE MOTORS, "Imperial" Marine

- Bruce Stewart & Co., Ltd., Charlottetown, P.E.I.

GASOLINE STORAGE SYSTEMS, special underground

- S. F. Bowser & Co., Toronto.

GASOLINE

- *The Imperial Oil Co., Limited, Toronto.

GEARS, cut

- Hamilton Gear & Machine, Toronto.

GENERATORS

- *Canadian Crocker-Wheeler Co., Ltd., St. Catharines, Ont.
- *Canadian Westinghouse Co., Ltd., Hamilton, Ont.

GINS

- The Melchers Gin & Spirits Distillery Co., Ltd., Montreal, Que.

GLASSWARE

- Dominion Glass Co., Limited, Montreal, Que.

GLASSWARE, cut

- Roden Bros., Ltd., Toronto.

GLASS FOR BUILDINGS

- Toronto Plate Glass Importing Co., Limited, Toronto.

GLASS BENDERS

- Toronto Plate Glass Importing Co., Limited, Toronto.

GLASS, mirror

- Toronto Plate Glass Importing Co., Limited, Toronto.

GLOVES AND MITTS

- *A. R. Clarke & Co., Ltd., Toronto.
- Craig, Cowan Co., Ltd., Toronto.

GLUE

- *Delany and Pettit, Ltd., Toronto.

GOLD-FILLED WIRE AND PLATE

- Canadian Seamless Wire Co., Toronto.

GOLD AND SILVER REFINERS

- Canadian Seamless Wire Co., Toronto.

GRAIN CRUSHERS (Rapid Easy)

- J. Fleury's Sons, Aurora, Ont.

GRAPE JUICE

- J. J. McLaughlin, Ltd., Toronto.
- The Welch Co., Ltd., St. Catharines.

GRATES

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

GRAVITY CARRIERS

- *Canadian Mathews Gravity Carrier Co., Toronto.

GRILLES, metal

- *Canada Wire & Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London, Ont.

GRINDERS, Pedestal and Bench

- *Canadian Hart Wheels, Limited, Hamilton, Ont.

GRINDING and Polishing Machinery

- *Canadian Hart Wheels, Limited, Hamilton, Ont.

GRINDING WHEELS

- *Canadian Hart Wheels, Limited, Hamilton, Ont.
- *The Dominion Abrasive Wheel Co., Limited, New Toronto.

GRINDSTONES

- *Richards-Wilcox Canadian Co., Limited, London, Ont.

GUNN SECTIONAL BOOKCASES

- The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

GUY ANCHORS

- B. J. Coghlin Co., Ltd., Montreal.

GYPNUM, crushed

- *Albert Mfg. Co., Hillsborough, N.B.

GYPNUM PRODUCTS

- *Manitoba Gypsum Co., Ltd., Winnipeg, Man.
- De Laval Dairy Supply Co., Ltd., Peterboro, Ont.

HALL FURNITURE

- The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

HAMS

- F. W. Fearman Co., Ltd., Hamilton, Ont.

HANDLES (Axe, pick, sledge hammers, etc.)

- The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.

HANGERS

- *Dodge Mfg. Co., Ltd., Toronto.
- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

HARDWARE

- *Richards-Wilcox Canadian Co., Limited, London, Ont.
- Taylor-Forbes Co., Limited, Guelph, Ont.
- The Jas. Smart Mfg. Co., Limited, Brockville, Ont.

HARDWOOD FLOORING

- Wilson Bros. Limited, Collingwood, Ont.

HARDWOOD INTERIOR FINISH

- Wilson Bros., Ltd., Collingwood, Ont.

HARDWOOD VENEER DOORS TO DETAIL

- Wilson Bros., Ltd., Collingwood, Ont.

HARNESSES

- Lamontagne Ltd., Montreal, Que.

HARPPON GUY ANCHORS

- *Crouse-Hinds Co. of Canada, Ltd., Toronto.

HATS, men's straw

- The Crown Hat Co., Limited, Galt, Ont.

HATS, ladies' and children's straw

- The Crown Hat Co., Limited, Galt, Ont.

HATS, ladies' and children's felt and beaver

- The Crown Hat Co., Limited, Galt, Ont.

HATS, ladies' felt and straw

- Toronto Hat Mfg. Co., Toronto.

HAULAGE, Wire Rope

- The Dominion Wire Rope Co., Ltd., Montreal, Que.

HEATERS

- *Waterous Engine Works Co., Ltd., Brantford, Ont.

HEATERS, feed water

- *The Goldie & McCulloch Co., Ltd., Galt, Ont.

HEATING APPLIANCES

- *Sheldons, Limited, Galt, Ont.

HEATING SYSTEMS

- Gurney Foundry Co., Limited, Toronto.

HESSIANS

- The Canadian Bag Co., Limited, Montreal, Que.

HINGES

- *The Steel Co. of Canada, Limited, Hamilton, Ont.

HOISTS

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Northern Crane Works, Limited, Walkerville, Ont.

HOISTS, electric and pneumatic

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Canadian Link Belt Co., Toronto.
- *Northern Crane Works, Limited, Walkerville, Ont.

HOISTING MACHINERY

- *M. Beatty & Sons, Ltd., Welland, Ont.
- *Northern Crane Works, Limited, Walkerville, Ont.

HOSE, fire

- *Canadian Consolidated Rubber Co., Limited, Montreal, Que.
- Dunlop Tire & Rubber Goods Co., Limited, Toronto.

HOSE, half, Imperial

- Kingston Hosiery Co., Ltd., Kingston, Ont.

HOSE, rubber

- *Canadian Consolidated Rubber Co., Limited, Montreal, Que.
- Dunlop Tire & Rubber Goods Co., Limited, Toronto.
- *Gutta Percha & Rubber, Limited.

HYDRAULIC PRESSES

- Bawden Machine Co., Limited, Toronto.
- *William R. Perrin, Ltd., Toronto.

ICE CREEPERS

- Parmenter & Bulloch Co., Limited, Gananoque, Ont.

ICE-MAKING MACHINERY

- The Linde Canadian Refrigeration Co., Limited, Montreal, Que.

INCUBATORS & BROODERS

- Lee Mfg. Co., Ltd., Pembroke, Ont.

INDEX CARDS

- Business Systems, Ltd., Toronto.

INJECTORS, automatic and autopoitive

- Penberthy Injector Co., Limited, Windsor, Ont.

INSULATION, patent seamless cork

- *Canadian H. W. Johns-Manville Co., Toronto.

INTERLOCKING RUBBER TILING

- *Dunlop Tire & Rubber Goods Co., Limited, Toronto.
- *Gutta Percha & Rubber Mfg. Co., of Toronto, Limited, Toronto.

INVERTS

- Standard Clay Products, Ltd., St. Johns, Que.

IRON

- *Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

IRON AND STEEL BARS

- *The Steel Co. of Canada, Limited, Hamilton, Ont.

IRON, refined bar

- Starr Mfg. Co., Ltd., Dartmouth, N.S.

IRON PUMPS

- *The Bawden Machine Co., Ltd., Toronto.

IRON STAIRWAYS

- *Canada Wire & Iron Goods Co., Hamilton, Ont.
- *Dennis Wire & Iron Works Co., London, Ont.

IRONWORK, architectural

- *Canada Wire & Iron Goods Co., Hamilton, Ont.

IRONWORK, ornamental

- *Canada Wire & Iron Goods Co., Hamilton, Ont.

IRON, LEAD AND PUTTY

- A. R. Whittall, Montreal, Que.

JAM, canned goods, etc.

- E. D. Smith & Son, Limited.

JAPANS, enamels, etc.

- A. Muirhead Co., Ltd., Toronto.

JOINTERS

- *Berlin Machine Works, Limited, Hamilton, Ont.

JELLY POWDER

- S. H. Ewing & Sons, Montreal, Que.

JEWELRY, enamelled souvenir

- Caron Bros., Montreal, Que.

JEWELRY, gold-filled

- Caron Bros., Montreal, Que.

JOIST HANGERS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

KELSEY WARM AIR GENERATOR

The Jas. Smart Mfg. Co., Limited, Brockville, Ont.

KILNS

*Sheldons, Limited, Galt, Ont.

KINDLING

Standard Fuel Co., Toronto.

KNIFE GRINDERS

*W. H. Banfield & Sons, Toronto.

KNITTED GOODS

*Penman's, Limited, Paris, Ont.

KNIVES

Henry Disston and Sons, Toronto.
The Peter Hay Knife Co., Limited, Galt, Ont.
Simonds Canada Saw Co., Limited, Montreal, Que.

KNIVES, pulp and paper

Henry Disston and Sons, Toronto.
The Peter Hay Knife Co., Limited, Galt, Ont.

KODAKS AND PHOTOGRAPHIC SUPPLIES

Canadian Kodak Co., Ltd., Toronto.

LABELS

Lawson & Jones, Ltd., London, Ont.

LABELS, lithographed

Harris Lithographing Co., Toronto.

LACE LEATHER

F. C. McCordick, St. Catharines, Ont.

*Sadler & Haworth, Montreal, Que.

*The D. K. McLaren Belting Co., Limited, Montreal, Que.

*The J. C. McLaren Belting Co., Limited, Montreal, Que.

LADDERS

Stratford Mfg. Co., Ltd., Stratford, Ont.

LADDERS, step.

*Otterville Mfg. Co., Ltd., Otterville, Ont.

LADLES, foundry

*Northern Crane Works, Limited, Walkerville, Ont.

LAGER

E. L. Drewry, Winnipeg, Man.

LARD

F. W. Fearman Co., Ltd., Hamilton, Ont.

LATH

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

LATHE CHUCKS

Ker & Goodwin, Brantford, Ont.

LATHE DOGS

Canadian Billings & Spencer, Ltd., Welland, Ont.

LAUNCHES

Peterboro Canoe Co., Ltd., Peterboro, Ont.

LAWN MOWERS

Taylor-Forbes Co., Limited, Guelph, Ont.

LAWN SWINGS

Stratford Mfg. Co., Ltd., Stratford, Ont.

LAVATORIES, enameled

Amherst Foundry Co., Limited, Amherst, N.S.

LAUNDRY SINKS

Amherst Foundry Co., Limited, Amherst, N.S.

LEAD

*The Consolidated Mining and Smelting Co. of Canada, Limited, Trail, B.C.

LEAD GRINDERS

Benjamin Moore & Co., Limited, Toronto.

LEAD SHEET

Toronto Plate Glass Importing Co., Limited, Toronto.

LEAD PIPE

*The Steel Co. of Canada, Limited, Hamilton, Ont.

Toronto Plate Glass Importing Co., Limited, Toronto.

*The Canada Metal Co., Toronto.

LEATHER

The Robson Leather Co., Limited, Oshawa, Ont.

LEATHER, bookbinders'

Clarke & Clarke, Ltd., Toronto.

LEATHER, fancy

Clarke & Clarke, Ltd., Toronto.

LEATHER GOODS

Lamontagne, Ltd., Montreal, Que.

LEATHER, hemlock sole

The Breithaupt Leather Co., Ltd., Berlin, Ont.

LEATHER, patent colt and side leather

*A. R. Clarke & Co., Ltd., Toronto.

LEATHER, sheep skin, etc.

Clarke & Clarke, Ltd., Toronto.

LEATHER, upholstering

Clarke & Clarke, Ltd., Toronto.

LEATHER, upper

A. Davis & Son, Ltd., Kingston, Ont.

LINK BELTING

*Canadian Link Belt Co., Toronto.

*The Dodge Mfg. Co., Ltd., Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

LINOLEUM

Dominion Oil Cloth Co., Limited, Montreal, Que.

LITHOGRAPHED BUSINESS STATIONERY

Business Systems, Ltd., Toronto.

LITHOGRAPHED TIN WARE

*MacDonald Mfg. Co., Limited, Toronto.

LITHOGRAPHERS

American Bank Note Company, Ottawa, Ont.

Harris Lithographing Co., Toronto.

*Montreal Lithographing Co., Montreal, Que.

Stone, Limited, Toronto.

Rolph & Clark, Limited, Toronto.

LOCKERS

*Canada Wire & Iron Works Co., Hamilton, Ont.

*Dennis Wire & Iron Works Co., London, Ont.

*Geo. B. Meadows, Wire, Iron and Brass Works Co., Toronto.

LOCOMOTIVE BLOCKS

Standard Clay Products, Limited, St. Johns, Que.

LOCOMOTIVES, industrial

*Montreal Locomotive Works, Ltd., Montreal, Que.

LOCOMOTIVE & MARINE BRASS WORKS

The James Morrison Brass Mfg. Co., Limited, Toronto.

LOOSE LEAF, BINDERS AND FORMS

Business Systems, Ltd., Toronto.

LOOSE LEAF SYSTEMS

Copeland-Chatterson Co., Limited, Toronto.

LOOSE LEAF SUPPLIES

The Esdale Press, Ltd., Edmonton.

LUBRICATORS, steam sight feed

Penberthy Injector Co., Limited, Windsor, Ont.

LUGS, for silos and water tanks

*Otterville Mfg. Co., Ltd., Otterville, Ont.

LUMBER

The C. Beck Mfg. Co., Ltd., Penetanguishene, Ont.

G. & J. Esplen, Montreal, Que.

LUMBER, asbestos

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

LUMBERING BLANKETS

Slingsby Mfg. Co., Ltd., Brantford, Ont.

LUMBER, red pine and spruce

Gillies Bros., Ltd., Braeside, Ont.

LUMBER, spruce, fir, larch and cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

LUMBER, white pine

Gillies Bros., Ltd., Braeside, Ont.

MACHINE TOOLS

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, conveying

*Canadian Link Belt Co., Toronto.

Canadian Mathews Gravity Carrier Co., Limited, Toronto.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

MACHINERY, flour mill

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

MACHINERY, grinding

*Canadian Hart Wheels, Limited, Hamilton, Ont.

MACHINERY, hoisting, etc.

*Polson Iron Works, Limited, Toronto.

J. & R. Weir, Montreal, Que.

*M. Beatty & Sons, Ltd., Welland, Ont.

*Northern Crane Works, Limited, Walkerville, Ont.

MACHINERY, ice cream

J. J. McLaughlin, Ltd., Toronto.

MACHINERY, iron working

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, pulp mill

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, pumping

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, punching and shearing

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, railroad and car shop

*John Bertram & Sons Co., Ltd., Dundas, Ont.

MACHINERY, roadmaking

Sawyer-Massey Co., Limited, Hamilton, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, sawmill

The E. Long Mfg. Co., Limited, Orillia, Ont.

P. Payette & Co., Pentanguishene, Ont.

W. P. Plant, Hastings, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINERY, sheet metal working

Brown, Boggs Co., Ltd., Hamilton, Ont.

MACHINERY, special

Bawden Machine Co., Limited, Toronto.

MACHINERY, tannery

W. P. Plant, Hastings, Ont.

MACHINERY, transmission

*Dodge Mfg. Co., Ltd., Toronto.

*Goldie & McCulloch Co., Limited, Galt, Ont.

MACHINERY, wood working

*Berlin Machine Works, Limited, Hamilton, Ont.

*The Watrous Engine Works Co., Limited, Brantford, Ont.

MACHINE WRENCHES

*Canadian Billings & Spencer, Ltd., Welland, Ont.

MACHINES, painting

Spramotor Co., London, Ont.

MAGNESITE

Canadian Carbonate Co., Limited, Montreal, Que.

MALT

*Hiram Walker & Sons, Limited, Walkerville, Ont.

MAPS AND MAP MOUNTING

The Geo. M. Hendry Co., Limited, Toronto.

Stone, Limited, Toronto.

MARTINGALE RINGS AND SLIDE LOOPS

The Arlington Co. of Canada, Ltd., Toronto.

MATCHERS

*Berlin Machine Works, Limited, Hamilton, Ont.

MATCHES

*The E. B. Eddy Co., Ltd., Hull.

MEATS, canned

The Wm. Davies Co., Ltd., Toronto.

MECHANICAL STOKERS

*Hare Engineering Co., Limited, Toronto.

*The Jones Underfeed Stoker Co., Ltd., Toronto.

MEDICINES, patented and pharmaceutical

Dr. Ed. Morin & Cie., Ltd., Quebec.

METAL, babbitt

*Canada Metal Co., Toronto.

*Tallman Brass and Metal Co., Hamilton, Ont.

Alonzo W. Spooner, Limited, Port Hope, Ont.

METAL CEILING

*Metallic Roofing Co., Limited, Toronto.

*Pedlar People, Ltd., Oshawa, Ont.

METAL PACKING

*Garlock Packing Company, Hamilton, Ont.

METAL ROOFING

*Pedlar People, Ltd., Oshawa, Ont.

METAL, spinning and stamping

The Booth-Coulter Copper and Brass Co., Limited, Toronto.

METAL SHINGLES

*The Metallic Roofing Co. of Canada, Limited, Toronto.

*Pedlar People, Ltd., Oshawa, Ont.

METAL SIDING

*The Metallic Roofing Co., Ltd., Toronto.

*Pedlar People, Ltd., Oshawa, Ont.

MILK BOTTLE CAPS

Business Systems, Ltd., Toronto.

MILK DEALERS' MACHINERY AND SUPPLIES

De Laval Dairy Supply Co., Ltd., Montreal, Que.

MILLBOARD, asbestos

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

MILLING CUTTERS

Pratt and Whitney Company of Canada, Dundas, Ont.

*Holt, Renfrew Ltd., Quebec, Que.

A. R. Clarke & Co., Ltd., Toronto.

MOCCASINS AND SLIPPERS (Indian tanned leathers)

Holt, Renfrew Ltd., Quebec, Que.

MORTISES

*Berlin Machine Works, Limited, Hamilton, Ont.

MOTORS

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines, Ont.

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

MOTORS, electric (alternating current)

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

Consolidated Electric Co., Limited, Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Canadian Crocker-Wheeler Co., Ltd., St. Catharines, Ont.

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

Consolidated Electric Co., Limited, Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

Consolidated Electric Co., Limited, Toronto.

*Jones & Moore Electric Co., Ltd., Toronto.

*Canadian Westinghouse Co., Ltd., Hamilton, Ont.

Consolidated Electric Co., Limited, Toronto.

*Berlin Machine Works, Limited, Hamilton, Ont.

NAILS

*The Steel Co. of Canada, Limited, Hamilton, Ont.

*The Steel Co. of Canada, Limited, Hamilton, Ont.

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*The Steel Co. of Canada, Limited, Hamilton, Ont.

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OAT CRUSHERS AND FLAKERS
J. Fleury's Sons, Aurora, Ont.**OFFICE STATIONERY**

*The Montreal Lithographing Co., Limited, Montreal, Que.

OILS

Brandram-Henderson, Ltd., Montreal, Que.

A. Ramsay & Son Co., Montreal, Que.

Sherwin-Williams Co. of Canada, Limited, Montreal, Que.

OIL FILTRATION AND CIRCULATING SYSTEMS

S. F. Bowser & Co., Toronto.

OIL STORAGE SYSTEMS, self-measuring

S. F. Bowser & Co., Toronto.

OIL COMPANIES

Commercial Oil Co., Ltd., Hamilton, Ont.

OILS (Petroleum products)

*British American Oil Co., Limited, Toronto.

*The Imperial Oil Co., Limited, Toronto.

OILS, road

*Paterson Manufacturing Company, Toronto and Montreal.

OILCLOTHS, floor and table

Dominion Oil Cloth Co., Limited, Montreal, Que.

OFFICE DESKS

*Goderich Organ Co., Goderich, Ont.

ORGANS

*Goderich Organ Co., Goderich, Ont.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

Thomas Organ & Piano Co., Woodstock, Ont.

ORGANS, pipe

Casavant Freres, St. Hyacinthe, Que.

Karn-Morris Piano and Organ Co., Ltd., Woodstock, Ont.

ORGANS, parlor

*Goderich Organ Co., Goderich, Ont.

ORNAMENTAL IRON WORK

*Canada Wire & Iron Goods Co., Hamilton, Ont.

*Dennis Wire & Iron Works Co., London, Ont.

*The Geo. B. Meadows, Toronto Iron and Brass Goods Works Co., Limited, Toronto.

OVENS, portable bake

Bedford Stove Co., Bedford, Que.

Mackenzie & Co., Ottawa, Ont.

Peerless Overall Co., Rock Island, Que.

Walker Pant and Shirt Co., Walkerville and Chatham, Ont.

The Standard Shirt Co., Limited, Montreal, Que.

OVERCOATINGS

Rosamond Woollen Co., Almonte, Ont.

OVERHEAD RUNWAYS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

PACKING BOXES

Barchard & Co., Limited, Toronto.

PACKING, engine

*Garlock Packing Co., Hamilton.

PACKING, rubber

*Canadian Consolidated Rubber Co., Limited, Montreal, Que.

Dunlop Tire & Rubber Goods Co., Limited, Toronto.

*Gatta Percha & Rubber, Limited, Jenkins Bros., Ltd., Montreal, Que.

PAIS AND TUBS, wooden

The C. Beck Mfg. Co., Limited, Penetanguishene, Ont.

PAINTERS' SUPPLIES

A. Muirhead Co., Ltd., Toronto.

PAINTS

R. C. Jamieson & Co., Limited, Montreal, Que.

PAINTS and VARNISHES

A. Muirhead Co., Ltd., Toronto.

Benjamin Moore & Co., Limited, Toronto.

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

The Imperial Varnish & Color Co., Limited, Toronto.

The Staneland Co., Ltd., Victoria, B.C.

A. Ramsay & Sons Co., Montreal, Que.

*The Dougall Varnish Co., Limited, Montreal, Que.

Standard Paint Co. of Canada, Limited, Montreal, Que.

PAINTS, barn and bridge

Standard Paint & Varnish Co., Ltd., Windsor, Ont.

PAINTS, preservative

Standard Paint Co. of Canada, Limited, Montreal, Que.

*Paterson Manufacturing Company, Toronto and Montreal.

PANELBOARDS (Electric)

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PAPER BOARDS

Bathurst Lumber Co., Limited, Bathurst, N.B.

PAPER, book

Barber Paper & Coating Mills, Ltd., Georgetown, Ont.

PAPER BOXES

King Paper Box Co., Ltd., Montreal, Que.

*Rudd Paper Box Co., Limited, Toronto.

PAPERS, bond

*Rolland Paper Co., Ltd., Montreal, Que.

PAPER, envelope

Provincial Paper Mills Limited, Georgetown, Ont.

The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER KRAFT, wrapping printing and waterproof

*Beveridge Paper Co., Ltd., Montreal, Que.

PAPER, news

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPER, wrapping

*The Riordon Pulp and Paper Co., Montreal, Que.

PAPERS, building

Bathurst Lumber Co., Ltd., Bathurst, N.B.

*The Riordon Pulp and Paper Co., Montreal, Que.

Standard Paint Co. of Canada, Ltd., Montreal, Que.

PAPER, coated, book and label

*Ritchie & Ramsay, Ltd., Toronto.

Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, coated cover

*Ritchie & Ramsay, Ltd., Toronto.

Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, coated box board

*Ritchie & Ramsay, Ltd., Toronto.

Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, enamelled blotting

*Ritchie & Ramsay, Ltd., Toronto.

Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, gummed tapes

Gummed Papers, Ltd., Brampton, Ont.

PAPER, label

Provincial Paper Mills Limited, Georgetown, Ont.

PAPER, ledger

*Rolland Paper Co., Limited, Montreal, Que.

The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER, super-book

The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER, wall

Stauntons, Ltd., Toronto.

PAPER, writing

The Toronto Paper Manufacturing Co., Cornwall, Ont.

PAPER, writing, high-grade

*Rolland Paper Co., Limited, Montreal, Que.

PAPER, writing, superfine

*Rolland Paper Co., Limited, Montreal, Que.

PARK SEATS

Stratford Mfg. Co., Ltd., Stratford, Ont.

PARLOR SUNDRIES

The Geo. McLagan Furniture Co., Limited, Stratford, Ont.

PATENTS

Fetherstonhaugh & Co., Toronto.

Ridout and Maybee, Toronto.

PATENT LITIGATION

Ridout and Maybee, Toronto.

PAY ROLL AUDITS

*International Time Recording Co. of Canada, Ltd., Toronto.

PEAS AND BEANS FOR SEED

W. P. Niles, Ltd., Wellington, Ont.

PERFORATED METALS

*Canada Wire & Iron Goods Co., Hamilton, Ont.

PERFORATED MUSIC ROLLS

The Otto Higel Co., Ltd., Toronto.

PERFUMES AND TOILET PREPARATIONS

Sovereign Perfumes Ltd., Toronto.

PETROLEUM PRODUCTS

*The Imperial Oil Co., Limited, Toronto.

PHOTOMAILERS

*The Thompson & Norris Co. of Canada, Ltd., Niagara Falls, Ont.

PIANOS

Dominion Organ & Piano Co., Ltd., Bowmanville, Ont.

*Gourlay, Winter and Leeming, Toronto.

Karn-Morris Piano and Organ Co., Limited, Woodstock, Ont.

PIANO ACTIONS

The Otto Higel Co., Ltd., Toronto.

PIANO KEYS

The Otto Higel Co., Ltd., Toronto.

PIANOS, player

*Gourlay, Winter and Leeming, Toronto.

Karn-Morris Piano and Organ Co., Limited, Woodstock, Ont.

PIANO, player actions

The Otto Higel Co., Ltd., Toronto.

PIANO STOOLS and BENCHES

*Goderich Organ Co., Goderich, Ont.

PICKLES

The Wm. Davies Co., Ltd., Toronto.

PICKLES AND CATSUPS

T. A. Lytle Co., Ltd., Toronto.

PIG IRON

*The Steel Co. of Canada, Limited, Hamilton, Ont.

PINE DOORS, SASH, MOULDINGS, ETC.

Wilson Bros., Limited, Collingwood, Ont.

PINS, society, emblems and badges

Caron Bros., Montreal, Que.

PIPE, cast iron, for water and gas

National Iron Works, Ltd., Toronto.

PIPE COUPLINGS

*The Steel Co. of Canada, Limited, Hamilton, Ont.

PIPE COVERINGS

*Eureka Mineral Wood & Asbestos Co., Toronto.

PIPE ORGANS

Karn-Morris Piano and Organ Co., Limited, Woodstock, Ont.

PIPES, culvert

Standard Clay Products, Ltd., St. Johns, Que.

PIPE AND NIPPLES, black and galvanized

*Canadian Tube & Iron Co., Ltd., Montreal, Que.

PIPE, sewer

Hamilton and Toronto Sewer Pipe Co., Limited, Hamilton, Ont.

Standard Clay Products, Ltd., St. Johns, Que.

PIPE, soil and fittings

Warden King Lt., Montreal, Que.

PIPE AND TUBES, wrought

*Page-Hersey Iron Tube and Lead Co., Ltd., Toronto.

PIPE, threading and cutting off machines

John H. Hall & Sons, Limited, Brantford, Ont.

PISTON RODS

*The Canadian Drawn Steel Co., Limited, Hamilton, Ont.

*Union Drawn Steel Co., Limited, Hamilton, Ont.

PLANERS

*Berlin Machine Works, Limited, Hamilton, Ont.

PLANING MILLS

G. & J. Esplen, Montreal, Que.

PLASTER OF PARIS

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, hard wall

*Albert Mfg. Co., Hillsborough, N.B.

PLASTER, land

*Albert Mfg. Co., Hillsborough, N.B.

PLAYING CARDS

*The Montreal Lithographing Co., Limited, Montreal, Que.

PLOWS

J. Fleury's Sons, Aurora, Ont.

PLUMBERS' SUPPLIES

The Garth Co., Montreal, Que.

The James Morrison Brass Mfg. Co., Ltd., Toronto.

PLUMBING APPLIANCES

Standard Sanitary Mfg. Co., Ltd., Limited, Toronto.

PLUMBING SUPPLIES

Toronto Plate Glass Importing Co., Limited, Toronto.

POLE LINE MATERIAL (wooden insulator top pins, side blocks, pole steps, cross arms)

The Lachute Shuttle Co., Limited, Lachute Mills, P.Q.

POLES, curtain

Daly & Morin, Montreal, Que.

POLES, telegraph and telephone, cedar

Fernie Lumber Co., Ltd., Fernie, B.C.

PORCELAIN INSULATORS

*Crouse-Hinds Co. of Canada, Ltd., Toronto.

PORK PACKERS AND CHEESE EXPORTERS

The Ingersoll Packing Co., Limited, Ingersoll, Ont.

POSTS, split cedar fence

Fernie Lumber Co., Ltd., Fernie, B.C.

POSTERS

Stone, Limited, Toronto.

POULTRY SUPPLIES AND MEDICINES

Lee Mfg. Co., Ltd., Pembroke, Ont.

POWDER, blasting

Canadian Explosives, Ltd., Montreal, Que.

POWER PRESSES

*Canadian Boomer & Boschert Press Co., Limited, Montreal, Que.

*William R. Perrin, Ltd., Toronto.

PRESSES, baling

*Canadian Boomer & Boschert Press Co., Ltd., Montreal, Que.

*William R. Perrin, Ltd., Toronto.

PRESSES, filter

*Canadian Boomer & Boschert Press Co., Ltd., Montreal, Que.

*William R. Perrin, Ltd., Toronto.

PRESSES, hydraulic

*Canadian Boomer & Boschert Press Co., Limited, Montreal, Que.

*Brown, Boggs Co., Ltd., Hamilton, Ont.

PRESSES, veneer

*William R. Perrin, Ltd., Toronto.
 *Canadian Boomer & Boschert Press Co., Ltd., Montreal, Que.

PRINTED BUSINESS STATIONERY

Business Systems, Ltd., Toronto.

PRINTERS

Rous & Mann, Ltd., Toronto.
 R. G. McLean, Toronto.

PRINTERS, catalogue

R. G. McLean, Toronto.

PRINTING AND LITHOGRAPHING

Lawson & Jones, Limited, London, Ont.

PRODUCE

The Wm. Davies Co., Ltd., Toronto.

PROVISIONS

The Wm. Davies Co., Ltd., Toronto.

PULLEYS

*Dodge Mfg. Co., Ltd., Toronto.
 *The Goldie & McCulloch Co., Ltd., Galt, Ont.

PULP, bleached sulphite

The Edward Partington Pulp and Paper Co., St. John, N.B.

PULP, sulphide

Bathurst Lumber Co., Ltd., Bathurst, N.B.

PUMPS

Spramotor Co., London, Ont.
 *Canadian Fairbanks-Morse Company, Limited, Montreal, Que.
 *Bawden Machine Co., Ltd., Toronto.

PUMPS, ammonia

*Bawden Machine Co., Ltd., Toronto.

PUMPS, boiler feed

*Bawden Machine Co., Ltd., Toronto.
 *The Goldie & McCulloch Co., Ltd., Galt, Ont.

PUMPS, centrifugal

*M. Beatty & Sons, Ltd., Welland, Ont.
 *Waterous Engine Works Co., Ltd., Brantford, Ont.

PUMPS, iron

*Goold-Shapley-Muir Co., Limited, Brantford, Ont.
 *Waterous Engine Works Co., Ltd., Brantford, Ont.

PUMPS, tar

*Bawden Machine Co., Ltd., Toronto.

PUMPS, turbine, and equipment

*Bawden Machine Co., Ltd., Toronto.

PUMPS (Turbine and reciprocating)

John McDougall, Caledonian Iron Works Co., Ltd., Montreal, Que.

PYJAMAS AND NIGHT ROBES

Williams, Greene & Rome, Berlin, Ont.

RADIATORS

Taylor-Forbes Co., Limited, Guelph, Ont.
 Warden King, Ltd., Montreal, Que.

RAILINGS, brass and iron

*Dennis Wire & Iron Works Co., London, Ont.

RAILWAY SIGNAL APPLIANCES

General Railway Signal Co. of Canada, Ltd., Montreal, Que.

RAILWAY SUPPLIES

*Canadian Steel Foundries, Ltd., Montreal, Que.
 *Chicago Bridge & Iron Works, Bridgeburg, Ont.
 B. J. Coghlin Co., Ltd., Montreal, Que.

RAILWAY TARIFF BINDERS

The Esdale Press Ltd., Edmonton.

READY-TO-WEAR GARMENTS, LADIES'

H. C. Boulter Co., Ltd., Toronto.

REAMERS

Pratt and Whitney Co. of Canada, Dundas, Ont.
 *Butterfield & Co., Rock Island, P.Q.

"REDWOOD" lager

E. L. Drewry, Winnipeg, Man.

REED AND RATTAN GOODS

Canada Furniture Mfgs., Limited, Woodstock, Ont.

REFRIGERATORS

Sanderson-Harold Co., Ltd., Paris, Ont.
 Lee Mfg. Co., Ltd., Pembroke, Ont.

REFRIGERATING MACHINERY

The Linde Canadian Refrigeration Co., Ltd., Montreal, Que.

REFRIGERATORS, store, homes and institutions

Ham & Nott Co., Ltd., Brantford, Ont.
 John Hillock & Co., Ltd., Toronto.

REINFORCEMENT BARS

*The Steel Co. of Canada, Limited, Hamilton, Ont.

REINFORCEMENT for concrete

*Canada Wire & Iron Goods Co., Hamilton, Ont.
 *Pedlar People, Ltd., Oshawa, Ont.

RINGS, gold

Caron Bros., Montreal, Que.

RIVETS

*Canadian Tube & Iron Co., Ltd., *The Steel Co. of Canada, Limited, Hamilton, Ont.

RIVETS, bifurcated and tubular

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

RIVETS AND BURRS, iron, copper and brass

Parmenter & Bulloch Co., Limited, Gananoque, Ont.

ROLLERS, shade

Daly & Morin, Montreal, Que.

ROOFING, metal

*Metallic Roofing Co., Limited, Toronto.

ROOFING, ready to lay

*Bird & Son, Hamilton.
 *Canadian H. W. Johns-Manville Co., Toronto.
 Standard Paint Co. of Canada, Ltd., Montreal, Que.
 *Paterson Mfg. Co., Toronto and Montreal.

ROOF TRUSSES

*The Canadian Bridge Co., Ltd., Walkerville, Ont.
 *Dominion Bridge Co., Ltd., Montreal, Que.

ROPE

*Doon Twines Ltd., Doon, Ont.

ROPE, cotton

Hamilton Cotton Co., Hamilton, Ont.

RUBBER FOOTWEAR

Ames Holden, McCready, Limited, Montreal, Que.
 *Gutta Percha & Rubber, Ltd.
 The Miner Rubber Co., Limited, Granby, Que.

RUBBER GOODS

*Canadian Consolidated Rubber Co., Limited, Montreal, Que.
 *Gutta Percha & Rubber, Ltd.
 *Dunlop Tire & Rubber Goods Co., Limited, Toronto.

RUBBER MOULDS

Bawden Machine Co., Ltd., Toronto.

RUBBER PACKING

*Garlock Packing Company, Hamilton, Ont.

RULES

The Lufkin Rule Co. of Canada, Ltd., Windsor, Ont.

RYE

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

SADDLERY HARDWARE

*Dominion Forge and Stamping Co., Walkerville, Ont.

SAFES

*Goldie & McCulloch Co., Limited, Galt, Ont.

SAMPLE CASES

The M. Langmuir Mfg. Co. of Toronto, Ltd., Toronto.
 J. Eveleigh & Co., Ltd., Montreal, Que.

SANDERS

*Berlin Machine Works, Limited, Hamilton, Ont.

SANDPAPER

*Delany and Pettit, Ltd., Toronto.

SASH CORD, cotton

Hamilton Cotton Co., Hamilton, Ont.

SALT

Canadian Salt Co., Ltd., Windsor, Ont.

SANITARY PAPER TOWELS

*E. B. Eddy Co., Ltd., Hull, Que.

SAW SHARPENING MACHINERY

*Canadian Hart Wheels, Limited, Hamilton, Ont.

SAWS

Henry Disston & Sons, Limited, Toronto.
 Shurly & Deitrich, Galt, Ont.

SAWS, band

*Berlin Machine Works, Limited, Hamilton, Ont.

SAWS, crosscut

*Berlin Machine Works, Limited, Hamilton, Ont.

SAWS, crosscut and band

Shurly & Deitrich, Galt, Ont.

SAWS, circular mill

Shurly & Deitrich, Galt, Ont.

SAWS, hack

*Victor Saw Works, Ltd., Hamilton, Ont.

SAWS, of all kinds

Simonds Canada Saw Co., Limited, Montreal, Que.

SAWS, rip

*Berlin Machine Works, Limited, Hamilton, Ont.
 Shurly & Deitrich, Galt, Ont.

SAWMILLS

G. & J. Esplen, Montreal, Que.
 *The Waterous Engine Works Co., Ltd., Brantford, Ont.

SAWS, specialties

*Victor Saw Works, Ltd., Hamilton, Ont.

SCALES

The Gurney Scale Co., Hamilton, Ont.

SCALES, counter

The Gurney Scale Co., Hamilton, Ont.

SCALES, railway track, etc.

The Gurney Scale Co., Hamilton, Ont.

SCREENS

*Canada Wire & Iron Goods Co., Hamilton, Ont.

SCREEN DOORS AND WINDOWS

Sanderson-Harold Co., Ltd., Paris, Ont.
 Ham & Nott Co., Ltd., Brantford, Ont.

SCREWS

*John Morrow Screw & Nut Co., Ltd., Ingersoll, Ont.
 *The National Acme Mfg. Co., Montreal, Que.
 *The Steel Co. of Canada, Limited, Hamilton, Ont.

SCREW PLATES

*Butterfield & Co., Rock Island, P.Q.

SECURITIES, engraved

American Bank Note Co., Ottawa, Ont.

SERGES

Rosamond Woollen Co., Almonte, Ont.

SHAFTING

Canada Forge Co., Ltd., Welland, Ont.
 *Canadian Drawn Steel Co., Ltd., Hamilton, Ont.

*The Goldie & McCulloch Co., Ltd., Galt, Ont.

*Union Drawn Steel Co., Limited, Hamilton, Ont.

*Dodge Mfg. Co., Ltd., Toronto.

SHANTY BLANKETS

Shingsby Mfg. Co., Ltd., Brantford, Ont.

SHAPERS

*Berlin Machine Works, Limited, Hamilton, Ont.

SHEAR BLADES, iron

The Peter Hay Knife Co., Limited, Galt, Ont.

SHEATHING

*Paterson Mfg. Co., Toronto and Montreal.

SHEATHING, asbestos corrugated

*Eureka Mineral Wool & Asbestos Co., Toronto.

SHEET METAL STAMPINGS

Acme Stamping & Tool Works, Ltd., Hamilton, Ont.

SHELLAC

*Berry Bros., Ltd., Winnipeg, Man.

SHINGLES, asbestos cement

*Canadian H. W. Johns-Manville Co., Toronto.

SHIRTS

MacKenzie & Co., Ottawa, Ont.
 Williams, Greene & Rome, Berlin, Ont.
 Peerless Overall Co., Rock Island, Que.
 John W. Peck & Co., Ltd., Montreal, Que.

SHIRTS, workmen's

*A. R. Clarke & Co., Ltd., Toronto.

SHOE PEGWOOD

O. Chalifour, Quebec, Que.

SHOE LININGS

Galt Knitting Co., Ltd., Galt, Ont.

SHOES, running and athletic

Ames-Holden-McCready, Ltd., Montreal, Que.

SHOOKS

Barchard & Co., Ltd., Montreal, Que.

SILVER BULLION

Coniagas Reduction Co., Ltd., St. Catharines, Ont.

SILVERWARE

Toronto Silver Plate Co., Limited, Toronto.

SILVERSMITH

Canadian Wm. A. Rogers, Ltd., Toronto.
 Standard Silver Co., Toronto.

SILVERWARE, sterling

Roden Bros., Limited, Toronto.

SINKS, enamelled

Amherst Foundry Co., Limited, Amherst, N.S.

SKATES, figure

Canada Cycle and Motor Co., Ltd., Toronto.

SKATES, genuine Acme

Canada Cycle and Motor Co., Ltd., Toronto.

SKATES, hockey

Canada Cycle and Motor Co., Ltd., Toronto.

SKATES, ice

Canada Cycle and Motor Co., Ltd., Toronto.

SKIFFS

Peterboro Canoe Co., Ltd., Peterboro, Ont.

SKYLIGHTS

*Metallic Roofing Co., Limited, Toronto.
 *Pedlar People, Ltd., Oshawa, Ont.

SLEIGHS

Tudhope-Anderson Co., Limited, Orillia, Ont.

SLIPPERS

Ames-Holden-McCready, Ltd., Montreal, Que.

SMOKE CONSUMERS

*The Jones Underfeed Stoker Co., Ltd., Toronto.

SOAPS

J. Barsalou & Co., Ltd., Montreal, Que.

SOAP (soft, oil)

The Imperial Varnish & Color Co., Ltd., Toronto.
 Sherwin-Williams Co. of Canada, Limited, Montreal, Que.

SODA WATER FOUNTAINS

J. J. McLaughlin, Ltd., Toronto.

SOIL PIPE

Anthes Foundry, Ltd., Toronto.

SOLDER

Alonso W. Spooner, Ltd., Port Hope, Ont.
 *Canada Metal Co., Toronto.

SOLDER, silver

Geo. H. Lees & Co., Hamilton.

SOLDER, wire and bar

*American Can Co., Montreal, and Hamilton.

SOLDERING IRONS AND COPPERS

Brown, Boggs Co., Ltd., Hamilton, Ont.

SNOWSHOES

Holt, Renfrew, Ltd., Quebec, Que.

SPARK PLUGS

Canadian Carbon Co., Limited, Toronto.

SPIRAL CONVEYORS

Canadian Mathews Gravity Carrier Co., Ltd., Toronto.
 *The Goldie & McCulloch Co., Ltd., Galt, Ont.

SPLIT PEAS

H. Murton, Guelph, Ont.

SPIKES, railway and marine

Starr Mfg. Co., Ltd., Dartmouth, N.S.

SPIRITS

The St. Hyacinthe Distillery Co., Ltd., St. Hyacinthe, Que.

*Hiram Walker & Sons, Limited, Walkerville, Ont.

SPORTING MEDALS AND TROPHIES

Roden Bros., Limited, Toronto.

SPRAYERS

Sparamotor Co., London, Ont.

SPRING COTTERS

*Richards-Wilcox Canadian Co., Limited, London, Ont.

SPRINGS

*Canadian Steel Foundries, Ltd., Montreal, Que.

B. J. Coghlin Co., Ltd., Montreal, Que.

Guelph Spring & Axle Co., Ltd., Guelph, Ont.

SPRINGS, carriage and automobile

Guelph Spring and Axle Co., Ltd., Guelph, Ont.

SPRINKLER SYSTEMS

*Chicago Bridge & Iron Works, Bridgeburg, Ont.

*General Fire Equipment Co., Ltd., Toronto.

*Purdy, Mansell, Ltd., Toronto.

*Vogel Co. of Canada, Ltd., Montreal, Que.

SPROCKETS, gray iron and flint rim

*Canadian Link Belt Co., Toronto.

STAINS

R. C. Jamieson & Co., Ltd., Montreal, Que.

STAINS, creosote shingle

A. Muirhead Co., Ltd., Toronto.

STAMPINGS

*Dominion Forge and Stamping Co., Ltd., Walkerville, Ont.

STAMPS, steel, brass and rubber

Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

STAMP MILLS

*Jenckes Machine Co., Sherbrooke.

STATIONERY, office

Harris Lithographing Co., Toronto.

STEAM PIPE and BOILER COVERINGS, asbestos

*Canadian H. W. Johns-Manville Co., Toronto.

*Eureka Mineral Wool & Asbestos Co., Toronto.

STEAM SHOVELS

*M. Beatty & Sons, Ltd., Welland, Ont.

STEAM SPECIALTIES

*Sheldons, Ltd., Galt.

STEAM TRAPS

*Canadian Sirocco Co., Windsor, Ont.

*Canadian Morehead Manufacturing Co., Limited, Woodstock.

STEEL

*Nova Scotia Steel & Coal Co., Ltd., New Glasgow, N.S.

STEEL BILLETS and BLOOMS

*The Steel Company of Canada, Limited, Hamilton.

STEEL BUILDINGS

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*Dominion Bridge Co., Ltd., Montreal.

*Pedlar People, Ltd., Oshawa, Ont.

STEEL CASTINGS

*Canadian Steel Foundries, Ltd., Montreal, Que.

*Dominion Steel Foundry Co., Ltd., Hamilton.

STEEL PEN STOCKS

*Jenckes Machine Co., Sherbrooke.

STEEL RODS

*The Steel Co. of Canada, Ltd., Hamilton.

STEEL SASH

*Dennis Wire & Iron Works Co., London.

*Henry Hope & Sons, Ltd., Toronto.

STEEL SHELVING

*Dennis Wire & Iron Works Co., London.

STEEL WIRE RODS

*The Steel Company of Canada, Limited, Hamilton.

TELEPHONE ACCESSORIES

*Northern Electric Co., Limited, Montreal.

STENCILS, brass

Pritchard-Andrews Co. of Ottawa, Ltd., Ottawa, Ont.

STEREOTYPING

Central Press Agency, Toronto

STOKERS

*Hare Engineering Co., Limited, Toronto.

*The Jones Underfeed Stoker Co., Ltd., Toronto.

STOOLS and BENCHES, piano and organ

*Otterville Mfg. Co., Ltd., Otterville, Ont.

STONE

The Corinthian Stone Co., Guelph, Ont.

The Hagersville Contracting Co., Hagersville, Ont.

STORE FITTINGS

The Canadian Office & School Furniture Co., Ltd., Preston, Ont.

STOVES

Tudhope-Anderson Co., Limited, Orillia, Ont.

Bedford Stove Co., Bedford, Que.

STOVE LININGS

Standard Clay Products, Ltd., St. Johns, Que.

STOVES and RANGES

Bedford Stove Co., Bedford, Que.

Gurney Foundry Co., Ltd., Toronto.

Lee Mfg. Co., Ltd., Pembroke, Ont.

The Jas. Smart Mfg. Co., Ltd., Brockville, Ont.

McClary Mfg. Co., London, Ont.

STRETCHERS, lace curtain

*Otterville Mfg. Co., Ltd., Otterville, Ont.

STRUCTURAL STEEL

Dominion Bridge Co., Montreal.

*Hamilton Bridge Works Co., Ltd., Hamilton.

*The Canadian Bridge Co., Ltd., Walkerville, Ont.

*The Structural Steel Co., Ltd., Montreal.

SUIT CASES

J. Eveleigh & Co., Ltd., Montreal.

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*The Waterous Engine Works Co., Ltd., Brantford.

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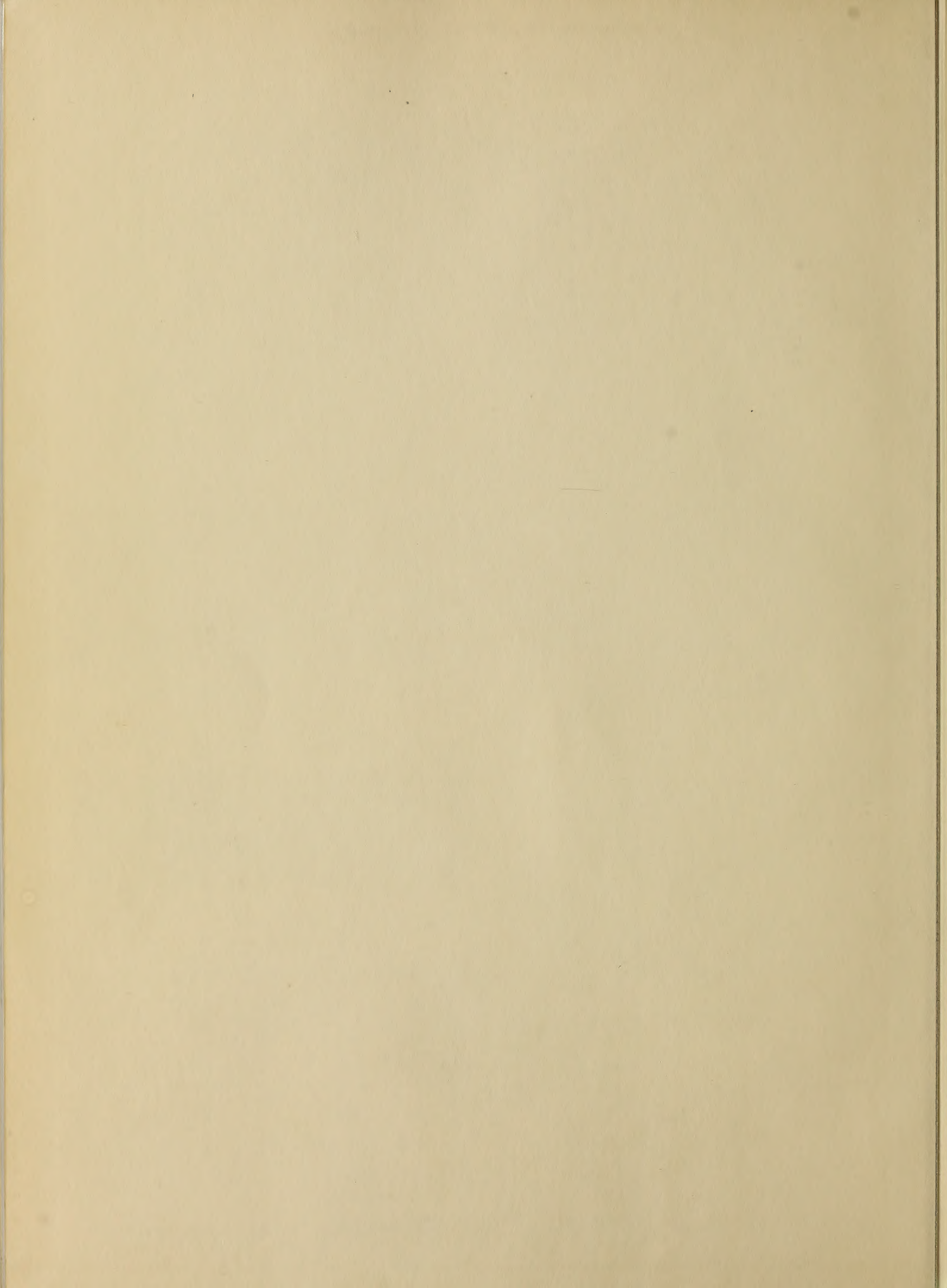
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